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THE MORE IMPORTANT RECORDS FOR JUNE

Very heavy populations of grasshoppers appeared during the month in southeastern Arizona, the Panhandles of Texas and Oklahoma, and southwestern Kansas. Grasshopper populations in Ohio, Indiana, and Illinois were larger than usual. Localized infestations were found in various parts of the remaining Great Plains and Rocky Mountain States.

The peak of Mormon cricket oviposition has been passed in Oregon and Washington. Extensive migrations occurred in Idaho. Development has been delayed in Nevada because of unfavorable weather. Infestations in Montana, Wyoming, and South Dakota are light, except in a few local areas.

The rose chafer was generally more abundant than usual from New England southward to Virginia and westward to Illinois and Wisconsin.

Japanese beetle adults began appearing in numbers during the third week in the month throughout the infested area.

Emergence of white-fringed beetle adults was first observed during the second week of the month in Louisiana.

Very heavy flights of army cutworm moths were observed in eastern Montana and western Nebraska.

In Ventura County, Calif., serious damage to sugar beets was occasioned by the beet armyworm.

Heavy infestations of hessian fly were reported in Ohio, Illinois, and Iowa.

In general, chinch bug was less abundant than was anticipated over practically the entire infested area. Heavy rains played an important part in this reduction.

Corn ear worm was reported as more abundant than usual in the South Atlantic States and westward to Illinois.

Surveys carried on in Illinois during the last week in May showed that the sweetclover weevil extends throughout the northern half of the State.

Comstock's mealybug females appeared about 8 days earlier than they did last year in western Virginia and eastern West Virginia.

Rather heavy infestations of European red mite were reported from Maine, Pennsylvania, and Ohio.

The peak of emergence of plum curculio larvae occurred during the first week in the month in south-central Pennsylvania. The first emergence of adults from the soil occurred during the third week in the month in Georgia. First pupation of the season occurred in the Fort Valley section nearly a week earlier than in 1940. Emergence of adults from the soil began during the second week in the month. Infestation in this region was heavier than during 1940 and the peach crop was somewhat later than usual.

Heavy build-up of purple scale in southern California was producing a serious problem on citrus, particularly in the coastal areas.

Blister beetles damaging a wide variety of crops were reported as numerous from West Virginia southward to the Gulf.

Seed-corn maggot was quite prevalent and destructive from New York, westward to Michigan. This insect was also quite destructive in parts of Utah.

Colorado potato beetle was reported as unusually abundant from New York westward to the Dakotas and Nebraska.

Tomato psyllid was reported as very abundant in parts of Montana.

The bean leaf beetle caused considerable damage from West Virginia westward to Illinois.

Serious injury to cannery peas by the pea aphid was reported from western New York across Ohio into Indiana, thence westward to Wisconsin and Minnesota. This insect was numerous on alfalfa in parts of Nebraska and Utah.

Boll weevil populations were generally above normal from South Carolina and Georgia, westward into Texas.

The cotton flea hopper was doing considerable damage in parts of Texas.

Cankerworms were defoliating trees in scattered localities in Vermont, West Virginia, North Dakota, Nebraska, and Kansas.

Forest tent caterpillar was generally abundant throughout New England and in scattered localities in Wisconsin, Nebraska, and Mississippi.

Egg-hatching season of the gypsy moth in New England was approximately 3 weeks earlier than it was last year.

Elm leaf beetle was generally prevalent in New England, southward to New York and Pennsylvania, and into Ohio.

THE MORE IMPORTANT RECORDS IN CANADA FOR MAY-JUNE

Grasshopper eggs were hatching in the Prairie Provinces during the latter part of May, but reports from Manitoba and Saskatchewan, dated May 27, indicated that the general hatch would be late, owing to prevailing cool weather. However, by mid-June grasshoppers were sufficiently numerous and active in certain areas of these Provinces and Alberta to necessitate the use of poisoned bait, and some damage to cereals and sugar beets was reported at Portage, La Prairie, Carman, and Emerson, Manitoba.

Enormous numbers of adults of the wheat stem sawfly were emerging in mid-June throughout the infested areas of Alberta and Saskatchewan. Emergence was about a week earlier than in 1940. This species increased in abundance and range in these two Provinces last year, and indications are that the 1941 outbreak will be as severe as, or worse than, that of 1940.

Overwintering adults of Say's stink bug were very abundant in extreme southern Alberta, feeding on weeds and native wild plants. Oviposition was first noted on April 28 and hatching commenced on May 20.

Wireworms are causing loss to the wheat crop in the Prairie Provinces. Considerable damage was being inflicted by them in southern and western districts of Manitoba. In Saskatchewan serious thinning of wheat on fallow occurred in areas where the soil was dry at seed level. However, considerable loss was also reported in the southeast, notwithstanding a wet spring. A survey early in June indicated 10 percent damage to summer-fallow wheat in the Saskatoon-Battleford area and 5 percent in the Battleford-Glaslyn-Bapaume district. In Alberta, wireworms were causing slight thinning of wheat in the foothills area, and some losses to sugar beets in the Jamieson-Barnwell area.

The pale western cutworm caused some crop losses locally in southern Alberta, but no cutworm damage was evident in Saskatchewan up to mid-June. In British Columbia there have been fewer reports of cutworm injury than in 1940, when an outbreak of the variegated cutworm occurred.

A major flight of June beetles (Phyllophaga anxia Lec. and P. fusca Froel.) occurred in central Ontario during May and the early part of June over an area of at least 5,000 square miles, affecting all counties between Perth and Peterborough, and many deciduous trees were severely defoliated. The last important outbreak of these insects in the region concerned occurred in 1938. A heavy flight of a third species, P. futilis Lec., occurred in the Chatham district in southwestern Ontario.

Pupae of the European corn borer were found at St. Jean, Quebec, on May 12, about 1 month earlier than in 1940. By June 14 approximately 50 percent of overwintering larvae had pupated. In the Ottawa district about 30 percent had pupated by June 11. At La Salle, in southwestern Ontario, eggs were found on June 14, the earliest date for corn borer eggs ever recorded for this Province.

Heavy flights of moths of the beet webworm were reported locally in southern areas of Saskatchewan and Alberta.

The usual reports of various degrees of crop damage by certain species of flea beetles have been received from Ontario, Manitoba, Alberta, and British Columbia.

The asparagus beetle has been taken at Mission, British Columbia. The only previous record for this province was Vancouver in 1934.

The striped cucumber beetle was reported causing widespread damage to cultivated host plants in southwestern Ontario, and heavy infestations were noted locally in New Brunswick.

Peas on Vancouver Island are seriously infested by the striped pea weevil (Sitona lineatus L.). This species was first recorded in North America at Victoria, British Columbia, in 1938. It attacks legumes generally.

Heavy infestations of the cabbage maggot, resulting in severe damage to the cabbage crop, are reported in southwestern Ontario.

The carrot rust fly, which during the last 5 years has become widespread in British Columbia, has caused from 50- to 90-percent loss of the carrot crop in the lower Fraser Valley. This pest was also found to have established itself on Vancouver Island in 1939, and is now causing serious losses to gardeners in the Victoria district.

The first pupa of the codling moth in the Annapolis Valley, Nova Scotia, was found on May 12. At Simcoe, in southern Ontario, the first moths were taken on May 27. By May 23, in the Okanagan Valley, British Columbia, the moths had been in evidence in orchards for over 2 weeks.

The eye-spotted budmoth is unusually prevalent in the Niagara district, and is a major pest this season in orchards in Norfolk County, Ontario.

The apple sawfly (Hoplocampa testudinea Klug.), which was first discovered in British Columbia at Victoria, Vancouver Island,

on June 5, 1940, occurs in the Oak Bay municipality over an area of approximately 6 square miles. The infestation of apples in this area ranges from slight to 50 percent, according to variety.

The tarnished plant bug has caused much damage to the apple crop in the Okanagan Valley, British Columbia, particularly in the Kelowna district.

A survey of orchards in the Annapolis Valley, Nova Scotia, indicates that, on the whole, the rosy apple aphid will be scarce this season.

Twig injury by the oriental fruit moth was beginning to appear in the Niagara district, Ontario, at the end of May.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

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Arizona. B. M. Gaddis and assistants (June 1-7): Rather severe infestation of Melanoplus mexicanus Sauss. is reported in the Sunset-Bonita and Dos Cabezos districts in Graham and Cochise Counties, covering an estimated 2,000 to 3,000 acres of cropland and 192,000 acres of range land. Range land populations are from 10 to several hundred per square yard and in the more heavily populated spots mesquite, willow, yucca, and other plants have already been completely defoliated. M. differentialis Thos. is now the dominant species in Maricopa County. Populations range from 15 to 30 per square yard in fields and from 10 to 75 along margins and ditch banks. Damage to young cotton and alfalfa is becoming evident. Hatching of M. mexicanus is complete in Pinal, Graham, and Cochise Counties, where this species represents 75 percent of the grasshopper populations. Approximately 60 to 80 percent are adults and the remainder fourth- and fifth-instar nymphs.

C. D. Lebert (June 21): Extremely heavy population of M. mexicanus in the Sulphur Springs Valley around Willcox involving more than 300 square miles. Range is stripped and the hoppers are now working on mesquite and yucca. Populations range as high as 200 to the square yard.

1/
New Mexico. (June 8-14): Hatching is about complete in the mid-Rio Grande Valley of central New Mexico but is only slightly over 80 percent complete in the northern counties. M. bivittatus represents about 65 percent and M. mexicanus approximately 20 percent.

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Colorado. (June 8-14): Infestations in southeastern Colorado are reported to be generally light, except in a few small areas. In the eastern half of Baca County from Campo northward to the Prowers County line, a heavy infestation of M. mexicanus is present with field populations ranging from 8 to 120 per square yard and marginal populations up to 100 per square yard. Very little crop damage is in evidence even though grasshoppers are present in grain crops. M. mexicanus makes up 95 percent of the population. In the irrigated areas of southeastern Colorado, populations are comprised of M. differentialis, M. bivittatus Say, M. packardii Scudd., and M. mexicanus. Heaviest populations were noted south and east of Pueblo, Pueblo County. Population counts were as high as 25 per square yard in fields and up to 200 per square yard in margins. A few wheatfields showed as high as 20 percent marginal damage. Dryland farming areas are generally very lightly infested except in small, localized areas.

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Texas. (June 8-14): A survey of the crop areas in the counties of the northwestern Texas Panhandle revealed light to threatening infestations, with the heaviest populations confined for the most part to margins.

1/ Where no name is given after the State the report is by B. M. Gaddis and assistants.

Little movement of grasshoppers into crops has occurred and practically no crop damage is in evidence. Hatching of grasshoppers is practically complete. M. mexicanus is dominant and comprises 75 percent of the populations in the margins of small-grain fields. In other environments, M. mexicanus, Acoloplus turnbullii Thos., M. packardii, and M. bivittatus are about equally divided in numbers. Marginal populations average 75 per square yard in grain, while field populations average less than 5. Inspections in Ochiltree, Hansford, Roberts, and Gray Counties, in the northern Texas Panhandle, indicate M. mexicanus to be the dominant species, making up 98 percent of the infestations with populations along roadsides and field margins numbering from 100 to 200 per square yard. In the more southern counties of northwestern Texas, Brachystola magna Gir., the giant lubber grasshopper, is the dominant species, with M. differentialis next in importance. Damage by these two species was occurring to young cotton plants in localized areas. B. magna is 50 percent adult. This species which hatched on range lands has moved into adjacent cottonfields as grasses began to dry.

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Oklahoma. (June 8-14): Survey of Beaver, Harper, and Texas Counties, in the Oklahoma Panhandle, showed the hatch to be complete and revealed light to threatening infestations in the small-grain areas. M. mexicanus is the dominant species, comprising 60 percent of the populations in areas where grain is the chief crop. In Harper County about 15 percent of them are adults. Migrations of M. mexicanus have been general into grain from adjacent margins and idle fields; however, damage has been confined to stripping of leaves and little head damage is noticeable. Populations average about 15 per square yard in small-grainfields and 50 per square yard along field margins. Heavier infestations than were expected earlier in the season are developing with a possibility of considerable damage to crops and general, light flights of M. mexicanus from the area. Fungus disease has reduced the A. turnbullii population about 30 percent throughout the Panhandle area and is still active. In the southwestern Oklahoma counties the hatch is complete, with M. bivittatus, the dominant species, representing 35 percent of the populations, while A. turnbullii comprises 25 percent and M. mexicanus 20 percent. Adult M. bivittatus were observed June 12. Field populations seldom range higher than 10 per square yard. Light marginal damage has occurred along some cotton and alfalfa field margins. Bottom lands and other low areas have been flooded several times this spring, which apparently caused a reduction in grasshopper populations.

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Kansas. (June 8-14): A survey in the southwestern Kansas counties of Morton, Stanton, Hamilton, Kearney, and Grant revealed an M. mexicanus infestation covering approximately 500,000 acres. Infestation is not uniformly heavy; however, populations average 25 per square yard and in some cases as high as 100 per square yard. A large percentage of grain fields are infested, but to date there is no apparent damage except to leaves. Grasshoppers are 25 percent adults. A check to determine the eastern extent of infestation revealed that, in general, the central counties of Jewell, Mitchell, Lincoln, Ellsworth, Rice, and Stafford form the eastern boundary of the grasshopper infestation. Populations in these counties are generally light, while in the counties immediately

adjacent on the west they are considerably heavier. The dominant species in northwestern Kansas is M. bivittatus, with M. mexicanus, A. turnbullii, and M. differentialis present. Damage has been slight and fields in general are not infested. Marginal counts range up to 150 nymphs per square yard. A. turnbullii populations are being materially reduced by fungous disease.

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Nebraska. (June 8-14): Populations are reported to be very light in the Panhandle section of the State, but high populations are present in the southern part. Hatching of all species is complete throughout the State. A few adult M. confusus Scudd., M. mexicanus, and A. turnbullii are present. Cool and damp weather greatly retarded activity and feeding of nymphs in southeastern Nebraska throughout the week. M. mexicanus adults were found in pasture land in Buffalo County on June 12. Populations in the southwestern counties average about 8 per square yard in small-grain fields and 70 per square yard in alfalfa fields. Roadside populations range from 20 to 800 per square yard, averaging approximately 90.

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Nevada. (June 1-7): A large band of M. occidentalis Thos. is reported scattered over an area 8 miles long by 4 miles wide in the Stone Cabin area of Nye County. Ninety percent of the grasshoppers are adult.

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California. (June 1-7): Adult M. devastator Scudd. are appearing in the Sacramento-San Joaquin Valley area; 90 percent of the population is represented by fifth- and late fourth-instar nymphs. Hatching is beginning in Placer County, and in a few areas, high populations are reported.

Ohio. T. H. Parks (June 25): Grasshoppers have increased since last year. First reports received from Greene and Hamilton Counties. Reported from points near Columbus, where young have hatched in large numbers and are entering garden, potato, and soybean plantings.

Indiana. J. J. Davis (June 23): Grasshoppers present in sufficient numbers in alfalfa and clover in northwestern Indiana to cause serious damage to corn when they leave their present feeding grounds.

L. F. Steiner (June 21): Very heavy populations in orchards at Vincennes injured by grasshoppers last year.

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Illinois. (May 25-31): Rather heavy but localized infestation was reported in Grundy County in an area south of Gardner and east of Dwight. Grasshoppers cover an area approximately 1 mile wide and 4 miles long.

Wisconsin. E. L. Chambers (June): M. bivittatus very abundant on several farms in Waupaca County, causing complete loss to untreated alfalfa and small grains.

B. M. Gaddis (June 1-7): Rains and cool weather greatly retarded hatching. In many northeastern counties of the State, the hatch of M. bivittatus and M. femur-rubrum was just beginning at the close of May.

Populations were very light and mostly along alfalfa field margins. Dominant species in the east-central portion of the State is M. bivittatus, with a few M. femur-rubrum present. Marginal populations as high as 50 to 75 per square yard were noted during the last week.

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Minnesota. (June 8-14): Heavy rains occurred throughout the northwestern portion of the State and grasshoppers were somewhat retarded in the rate of development during the week. The heavy M. bivittatus populations in this area are now 25 percent third instar and 70 percent fourth. There apparently was no large reduction in nymphal populations because of the heavy rains. Dissosteira carolina L. was reported hatching in considerable numbers on June 13. In southwestern Minnesota the hatch of M. differentialis, the dominant species, is approximately 60 percent complete, while that of M. bivittatus is about 90 percent complete. Hatching of M. femur-rubrum is just beginning.

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North Dakota. (June 8-14): Populations in northeastern North Dakota continued to develop; however, the rate of development was somewhat retarded. The major M. bivittatus populations in this area are now 25 percent third- and 70 percent fourth-instar nymphs. In northwestern North Dakota hatching and nymphal development also was retarded and, for the area as a whole, the hatch of M. mexicanus is not over 25 percent complete while M. bivittatus is approximately 45 percent complete.

J. A. Munro (June 23): Populations of 40 to 50 grasshoppers per square yard were commonly observed along roadsides and in pasture lands in Pembina and Walsh Counties, more than 80 percent being M. bivittatus. Less than 1 percent had reached the adult stage on June 21. Hoppers were scarce at Langdon.

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South Dakota. (June 8-14): Cool, cloudy, and rainy weather prevailed the entire week throughout much of South Dakota and nymphs developed but little. In the counties of central South Dakota, east of the Missouri River, hatching is practically complete, with the exception of possibly a few M. differentialis. Most M. mexicanus and M. bivittatus are in the fourth and fifth instars. M. differentialis nymphs are mainly second and third instars. Economic populations are very spotted. Grasshoppers have moved into small-grain fields to some extent; however, the heavier concentrations remain along field margins. In the more severely infested areas, marginal populations average about 150 per square yard; M. bivittatus is the dominant species.

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Wyoming. (June 8-14): A threatening infestation is reported 13 miles north of Riverton in Fremont County, covering an area approximately 10 miles long and 3 miles wide. M. bivittatus is the dominant species. Infestations are confined largely to field margins and very little crop damage has occurred to date. Threatening infestations also are present north of Worland, in Washakie County.

B. T. Snipes (June 21): M. bivittatus and M. femur-rubrum were present in considerable numbers in Sheridan, Big Horn, Park, Hot Springs, and Washakie Counties, and in parts of Fremont County. In Park County they range from 5 to 150 per square yard in margins and from 1 to 150

in fields, being first to fourth instars and hatching being about 50 percent complete. Population greatly reduced in some parts of Big Horn Basin, owing to weather conditions.

Missouri. L. Haseman (June 25): Grasshopper damage reported from Osage, Camden, Gasconade, Franklin, Pulaski, Madison, Laclede, Texas, Wright, Dent, Jefferson, and Crawford Counties. Over 90 percent of the injury is being done by M. bivittatus. M. mexicanus adults were observed first at Columbia on June 4.

Montana. H. B. Mills (June 23): Grasshoppers, M. mexicanus and M. bivittatus, were noted in a very heavily infested grain area in Pondera County. Few hoppers present in other parts of the State.

B. M. Gaddis (June 8-14): Hatching of M. mexicanus and M. bivittatus is estimated as 75 to 95 percent complete in the south-central portion of the State. Heaviest infestation to date has been found in western Big Horn County, where populations range from 25 to 90 nymphs per square yard. Rather severe infestations are also present in Treasure, Wheatland, and eastern Yellowstone Counties. Dry, warm weather which prevailed throughout the counties of northeastern Montana, was favorable to grasshopper development. Light hatching has occurred and it is estimated that the hatch will be complete in a week or 10 days if weather conditions remain favorable. M. mexicanus is the dominant species in northeastern Montana, comprising approximately 90 percent of the grasshopper populations. In north-central Montana, moderate infestations are present in Pondera and Toole Counties, while in Hill and Chouteau Counties they are very light and spotted.

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Utah. (June 1-7): Weather conditions during the week were generally unfavorable for grasshopper development throughout the State. In the central and south-central portions of Utah, grasshoppers are becoming generally distributed through alfalfa and grain crops. Heavy localized infestations were reported in areas in Juab, Beaver, Piute, Sevier, and Millard Counties. Field populations average 25 grasshoppers per square yard and, along crop margins and on idle land, average 100 per square yard. Hatching is estimated to be 70 percent complete in most crop areas, with M. mexicanus, M. bivittatus, and M. packardii comprising the dominant species, in the order named. Rapid hatching of Camnula pellucida Scudd. occurred during the last 2 weeks in the meadowland areas of Sanpete County. Populations up to 500 nymphs per square yard are present in meadowlands and along canal banks. In the north-central counties of Salt Lake and Davis the most heavily infested areas are reported on benchlands, with M. mexicanus comprising 80 percent of the populations. Crop injury caused by feeding is becoming noticeable throughout the infested areas of the State. Young corn, barley, and alfalfa crops have been severely damaged in several areas. (June 8-14): Throughout north-central Utah, M. mexicanus is the dominant species. Threatening infestations are reported in several localities in Weber, Utah, and Morgan Counties, where populations up to 100 per square yard are present along crop margins and on idle land adjacent to crops. The severely infested areas of these counties are, with few exceptions, restricted to benchland or foothill farming

districts. Considerable marginal damage is occurring in alfalfa and grain in Weber County. Populations in Rich and Summit Counties are very low. Rather severe infestations were found in several localities in Box Elder County.

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Idaho. (June 8-14): Hatching of the economic species of grasshoppers, except for C. pellucida, is complete in the eastern counties; eggs of this species have not begun to hatch. Populations are not heavy.

MORMON CRICKET (Anabrus simplex Hald.)

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South Dakota. (June 1-7): Mormon crickets in Lyman, Jones, and Mellette Counties are scattering and little migration is evident. Most crickets are now in the sixth- and seventh-instar and adult stages. In an area between Fresho and Oacoma in Lyman County, considerable numbers of crickets are present in small-grain fields, particularly along margins where counts range as high as 50 to 60 per square yard.

Nebraska. H. D. Tate (June 20): Some third- and fourth-instar crickets were found in Scotts Bluff County on June 4.

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Montana. (May 25-31): Increased migrations occurred in the Sioux Pass area of Big Horn County during the week. Populations in the Black Butte area in Chouteau County range from 2 to 25 per square yard, with approximately 75 percent in the 5th instar. In Beaverhead County crickets in the lower altitudes range from the third to sixth instars, with most in the fourth, while in the higher areas they range from first to third, and unhatched eggs are still present. Populations range from 100 to 300 crickets per square yard. (June 8-14): Migrations have increased in Yellowstone County following the recent rains and some infiltration into croplands has occurred; however, there has been little damage to crops. Adults are now appearing in the Pryor and Fly Creek areas.

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Idaho. (June 8-14): Cricket migrations were occurring generally during the week throughout the eastern part of the State. In Jefferson and Madison Counties, they occurred simultaneously in three separate areas originating in the area roughly bounded by the towns of Hamer, Roberts, and Rexburg. Cricket migrations in Clark and Fremont Counties also were quite extensive. The range of development of Mormon crickets in the eastern part of the State is from the sixth instar to the adult stage, with 80 percent adult; approximately 5 percent of the females have developed eggs. Populations in migrating bands ranged from 5 to 50 per square yard.

Utah. D. D. Jorgensen (June): Mormon crickets occur in an area of several miles in southeastern Tooele County, where the most heavily infested areas are in the Onaqui Range, Judd Creek, Government Creek, Simpson Springs, and northeastern Juab County, in the mountains just south of Eureka. Bands range in size from 2 to 5 acres. One band at Tallyway Canyon, Tooele County, was $3\frac{1}{4}$ mile long and more than a mile wide. By June 20, 10 percent were adult, but no mating had been observed. No severe crop injury has occurred. Range feeding has been common.

Wyoming. B. T. Snipes (June 21): Abundant in Crook, Sheridan, and Hot Springs Counties (at least 20,000 acres of crickets in Owl Creek Hills); one band in southern part of Washakie County; scattered crickets in Goshen.

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Nevada. (June 1-7): Adults are appearing in the McDermitt area of Humboldt County and in Buffalo Valley in Lander County. Hatching is still occurring in many of the higher areas and in some areas there are many fertile eggs still present. The most threatening infestation is in the area south of Elko extending west through Ten Mile Canyon and south to within a few miles of Jiggs. (June 8-14): Migrations from the higher altitudes toward the lower elevations have begun. Adult crickets have appeared in several of the infested areas and in some bands make up from 10 to 60 percent of the populations. Cricket bands have been noted ranging in development from 1st instar to adults and in some of the higher areas, hatching is still occurring.

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Washington. (May 25-31): Owing to the cool and rainy weather in Franklin County, cricket migrations during the week were not extensive. Increased migrations were noted in Yakima and Klickitat Counties.

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Oregon. (June 8-14): Migrations increased considerably during the week on the Warm Springs Indian Reservation. Oviposition was noted among the Mormon crickets on June 10 and continued on an increased scale throughout the remainder of the week. In Baker County, approximately 50 percent of the crickets are now in the adult stage. Migrations increased in Gilliam and Sherman Counties and in several areas the crickets have entered wheatfields, causing slight damage.

ROSE CHAFER (Macrodactylus subspinosus F.)

Massachusetts. A. I. Bourne (June 23): Reported as generally less abundant than usual, but very abundant in limited areas and causing an unusual amount of damage to roses and peonies.

New York. R. E. Horsey (June 16): More numerous than last year in the southern part of Rochester, feeding on roses, peonies, and other blossoms, including those of the Kousa dogwood.

N. Y. State Coll. Agr. News Letter (June): In the western part of the State the rose chafer became abundant in Cayuga County, where they fed on muck vegetables (as many as 100 to a single four-leaved plant), in Orleans County on peaches, and in Monroe and Chautauqua Counties where their feeding on beans closely resembles that of the bean beetle.

Pennsylvania. H. N. Worthley (June 4): First adults seen on June 3 at State College, mating and feeding in grape clusters.

Virginia. L. A. Hetrick (June 7): Reported as doing serious damage in gardens, especially in raspberry bushes.

A. M. Woodside (June 11): Feeding on fruit of isolated sour cherry trees at Timberville, causing moderate damage.

S. B. Fenne (June 18): Severely damaging rose, cherry, iris, peony, grape, and apple at Blacksburg.

West Virginia. F. W. Craig (June 18): Unusually abundant in Jackson, Kanawha, and Raleigh Counties.

Tennessee. G. M. Bentley (June 25): On May 24 and 28 the rose chafers were eating partly grown apples and peaches, causing complete destruction of fruit at Cosby, in Cocke County, Byrdstown, in Pickett County, and Shelbyville, in Bedford County.

Indiana. J. J. Davis (June 23): Reported as unusually abundant in the northern third of the State from June 7 to 14.

Illinois. C. L. Metcalf (June 26): Reported as doing serious damage to roses, peonies, viburnum, and geraniums in the Chicago area in early June.

Wisconsin. E. L. Chambers (June 28): Very abundant and doing damage in Jackson, Monroe, Columbia, and Waukesha Counties.

JAPANESE BEETLE (Popillia japonica Newm.)

Pennsylvania. T. L. Guyton (June 24): Grubs somewhat numerous in lawn at Freeport,

G. B. Slesman (June 20): First beetles were picked up on apples and roses near Swarthmore and at Morwood.

B. F. Coon (June 21): Two adults were captured in a trap on June 6 and one on June 9 at Lancaster. On June 19 a few adults were seen on potato but heavy emergence has not yet begun.

Delaware. L. A. Stearns (June 18): First adults observed on peach at Camden and on apple at Bridgeville.

Virginia. L. A. Hetrick (June 20): Adults abundant in vicinity of Cape Charles, on the Eastern Shore, but apparently emergence had not started farther north in Accomac County.

R. A. St. George (June 24): First beetle noted on privet hedge near East Falls Church, Arlington County.

H. G. Walker and L. D. Anderson (June 27): Much more abundant than last year in the Norfolk area on roses, grapes, soybeans, and sweet corn. Of the 1,580 beetles caught in 24 traps at the Virginia Truck Experiment Station last year, only 308 were caught by June 27, whereas 2,610 were caught in the same number of traps this year.

MAY BEETLES (Phyllophaga spp.)

Maine. A. E. Brower (May-June): Comparatively few beetles flew to light.

Ohio. T. H. Parks (June 25): White grubs have caused no defoliation to forest and shade trees, and no injury has been observed on shade-tree foliage.

Illinois. W. P. Flint (June 23): Light-trap catches at Urbana have shown about four times as many beetles taken in traps this year as in 1940.

Nebraska. H. D. Tate (May 20): June beetles, P. crassissima Blanch., were flying around lights in Buffalo County today.

WHITE-FRINGED BEETLE (Pantomorus leucoloma Boh.)

General. B. M. Gaddis (June 12): First field-collected adult beetles of the season from Mobile, Ala., and Laurel and Maxie, Miss., were reported during the week ended June 12. In Mobile the known infestation in the Magazine district was found to extend two blocks farther eastward and southward. In the Monroeville, Ala., area a field of sweetpotatoes at Tunnel Springs had been destroyed by larvae, was replanted, and the second plants were being killed by the larvae. A garden near Peterman, Ala., also showed larval damage. In the Floral area, near Svea, Fla., adult beetles were easily found on several properties. In New Orleans, La., emergence appeared to increase somewhat near the close of the week and high populations of beetles were found in one location along Hibernia Avenue.

WIREWORMS (Elateridae)

Maine. F. H. Lathrop (June 13): Eastern field wireworms (Limonius agonus Say) were destructive to planted corn seed in Franklin County.

New York. N. Y. State Coll. Agr. News Letter (June 9): Reports of damage by L. agonus were received from Long Island, and from Oneida and Erie Counties.

South Carolina. W. C. Nettles and F. Sherman (June 24): Fewer sand wireworms, Horistonotus uhlerii Horn, present than in 1940.

North Dakota. H. S. Telford (June 23): Prairie grain wireworm (Ludius aereipennis Kby.) has severely infested small grains at McCanna and Finley.

Georgia. P. M. Gilmer, et al. (June 14): Rather severe cotton-square damage reported from Turner County.

Iowa. H. E. Jaques (June): Light to moderate infestations in scattered counties throughout the State.

Utah. G. F. Knowlton (May 27): Wireworm injury severe in field corn, beans, and peas in home gardens at La Point. (June 2): Causing some injury to peas and lima beans in a few fields at Springville and Mapleton. (June 11): Damaging young corn in spots at Murray, as many as 50 being found around some hills at germination time.

California. M. W. Stone (June 17): Aeoleus livens Lec. is responsible for considerable damage to lima beans in an 80-acre planting near Saticoy, Ventura County. Siftings made in the rows on June 17 showed equal numbers of larvae of A. livens and Limonius californicus Mann.

ARMY CUTWORM (Chorizagrotis auxiliaris Grote)

Nebraska. H. D. Tate (June 20): Adult specimens received from Hall County on June 2. Reported as numerous in houses in Redwillow and Phelps Counties on May 22. Reported as common in homes, stores, and offices in Buffalo, Lincoln, Keith, Scotts Bluff, and Cherry Counties from June 3 to 5, and as very abundant in Scotts Bluff County on June 16.

Montana. H. B. Mills (June): Large numbers of army cutworm moths present generally in the eastern part of the State during the month of June.

Utah. G. F. Knowlton (May 30): Injury is decreasing generally. Moths were in flight and collected at Price in Carbon County during the last week.

VARIEGATED CUTWORM (Peridroma margaritosa Haw.)

Nebraska. H. D. Tate (June 20): Specimens were received from Franklin, Harlan, Furnas, and Douglas Counties on May 21 and 29 and June 6 and 13, respectively. Large numbers were observed on alfalfa in Lancaster County on June 9. On May 29 larvae were noted eating leaves of white clover in a blue grass-clover lawn in the same county.

California. L. G. Jones (May 24): Cutworms are very abundant on alfalfa in all fields examined in the Antelope Valley, and considerable leaf injury was observed.

GLASSY CUTWORM (Sidemia devastatrix Bracco)

Utah. G. F. Knowlton (June 6): Cutworms caused moderate to serious damage to corn at Lapoint and to newly set cabbage at Morgan and Salina; also in Utah County and in the Milford Valley area between May 20 and June 6.

BEEET ARMYWORM (Laphygma oxigua Hbn.)

California. M.W. Stone (June 6): Severe damage to late-planted beets necessitated control measures in Ventura County for first time in 10 years. Portions of fields wiped out completely and stand reduced from 20 to 30 percent in over 800 acres. Agrotis ypsilon Rott. was also present. (Det. by C. Heinrich.)

PAINTED LADY (Vanessa cardui L.)

Wisconsin. C. L. Fluke (June 20): V. cardui was extremely numerous on Canada thistle in Manitowoc County.

North Dakota. J. A. Munro (June 23): V. cardui and V. atalanta L. were unusually abundant throughout the State.

Utah. G. F. Knowlton (June): Large migration of V. cardui observed the last of May in Utah, Duchesne, Carbon, and Emery Counties. Larvae have attacked peas, thistle, round-leaf mallow, sunflowers, and cockle burs. On June 14 the butterflies were abundant in many

northern localities, and in Washington County in the southwestern part of the State.

WEBWORMS (Loxostege spp.)

Nebraska. H. D. Tate (June 20): Adults of alfalfa webworm were observed in alfalfa fields in Hitchcock and Redwillow Counties and around store windows in Buffalo and Phelps Counties on May 22. Also reported as numerous in Cherry, Dawes, Box Butte, Morrill, and Scotts Bluff Counties on June 5.

Texas. L. W. Noble (June 21): Garden webworm has caused light damage to cotton in a few fields at Presidio, Presidio County. Noted on pigweed, in fairly large populations, distributed over a rather large area.

Minnesota. M. W. Wing (May 20-June 19): One small infestation of sugar beet webworm on roadside weeds in low swale in Big Stone County.

Montana. H. B. Mills (June 23): Very heavy moth flight of beet webworm this spring. Damage starting on beets in Pondera County and the Yellowstone Valley. Attacking many crops.

WHITE-LINED SPHINX (Sphinx lineata F.)

Utah. G. F. Knowlton, et al. (May 28): Larvae abundant on range land in area from Woodside to Green River, and about 5 miles west of Green River where much Russian-thistle and various range plants have been stripped along highway. Three to six larvae per square yard, of all sizes, were present.

SAY'S STINKBUG (Chlorochroa sayi Stal)

Montana. D. J. Pletsch (June 20): Feeding by this bug is causing a wilting of the terminal growth of potato plants in the vicinity of Billings, Yellowstone County, as many as 10 adult pentatomids having been noted on 1 plant. Affected plants are not abundant but very noticeable.

H. B. Mills (June): Moderately abundant in eastern and central Montana.

CEREAL AND FORAGE - CROP INSECTS

WHEAT AND OTHER SMALL GRAINS

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (June 25): Greatly increased over last year, although no serious damage expected.

Illinois. W. P. Flint (June 23): Spring brood has been very severe, with heavy infestations developing in many of the central and south-central counties. Heavy breakage of winter wheat in south-central section of the State.

J. H. Bigger (June 26): Heavy infestations by spring generation in southern half of State.

Iowa. C. J. Drake (June 5): Moderate to fairly heavy in every county where winter wheat is grown. Rather heavy infestation in many wheatfields in the western part of the State. Large percentage of fields in Woodbury, Monona, Harrison, Crawford, Shelby, and Guthrie Counties showed injury and flaxseeds were not difficult to find. Infestation was fairly heavy in the eastern part of the State and in most of the southern counties. Present infestation is barely below the point of serious commercial damage and should be considered fairly heavy and on the verge of a serious outbreak.

Nebraska. H. D. Tate (June 11): Wheat stems infested with flaxseeds were received from Dodge County today.

CHINCH BUGS (Blissus leucopterus Say)

South Carolina. W. C. Nettles and F. Sherman (June 24): Fewer complaints than for last several years. Less corn has been planted next to small grain.

Mississippi. C. Lyle, et al. (June 25): Specimens on corn received from Clarke County on May 29 and from Humphreys County on June 14. Reported as damaging corn in Tunica County on June 16.

Illinois. W. P. Flint (June 23): Rains during the past month have considerably reduced the infestation.

J. H. Bigger (June 26): Abundant in spotted areas. Damage confined to thin stands of wheat.

Iowa. C. J. Drake (June 23): Infestation reduced by heavy rains of several days ago. Large percentage of first- and second-instar bugs were destroyed. Large numbers of newly-hatched nymphs have appeared in the fields during the last week. In the western part of the State some barley and wheatfields were examined where the population ran as high as 1 to 300 or 400 per linear foot. These fields were the exception rather than the rule, but a considerable number of fields examined showed populations running from a few to 15 or 20 young bugs per linear foot of drill row. Hatching was not complete.

H. E. Jaques (June): Infestations were light to moderate in a few counties in the southeastern section of the State, and light to heavy in the southwestern and central section.

Nebraska. B. M. Gaddis (June 16): Fields examined in southern Lancaster, most of Gage, and the western part of Johnson and Pawnee Counties showed a marked decrease in adult and nymphal populations. Some fungus was observed. The last 3 counties were in the heart of the flood area in southeastern Nebraska. Most of the nymphs were second and third instar. Just south of Lincoln the adult population had not been decreased and nymphal counts were the same as 10 days previous. In the barley fields of this latter area first-instar nymphs were the most prevalent. In a few counts made in southern Cass County

adults did not run over 5 to the linear foot, but nymphs were as high as 50. Potential migration threat reported in the eastern half of Saunders County on June 20.

Kansas. L. W. Hepner (June 18): Very few heavily infested fields in Cherokee County. The northwestern and north-central parts of Labette County seem to have the heaviest infestation. Elk County is in the center of the most heavily infested area of the State. All parts of the county are about equally infested. In Wilson and Crawford Counties harvest is well along and some barriers have been constructed. Control measures are necessary in Neosho County. In Butler County infestation is uniform with threatening populations.

Missouri. P. C. Stone (June 25): No large general State-wide flights from winter hibernating quarters to small grains this spring. In 1 or more of 20 counties small sporadic flights were recorded every 2 or 3 days from April 13 to May 13, and also on May 27. The State, as a whole, was rather lightly infested with the first brood. Most severe infestations were generally found in the winter-killed wheatfields in the northern and west-central parts of the State. Few bugs matured in vigorous fields of wheat and scarcely a field of oats was infested. Continued scattered and State-wide rains came too early in April and too late in May to bring about any material reduction of the first brood of bugs.

Oklahoma. H. T. Rainwater (June 20): Practically all of the wheat has been harvested or is fully ripened in the area most heavily infested with chinch bugs. Corn is from 6 inches to 6 feet high, so no injurious migrations are expected.

R. G. Dahms (June 22): Owing to hardbeating rains on June 6, many small nymphs were killed, and during May and first half of June a fungus killed many bugs. Most of the bugs are in the fourth and fifth instars, with a few first-generation adults.

WHEAT JOINTWORM (Harmolita tritici Fitch)

Ohio. T. H. Parks (June 25): Wheat jointworm has increased since last year and fields have been found where between 30 and 40 percent of the straws were carrying these galls. Lodging of straws is not prevalent and no serious damage is expected.

Illinois. J. H. Bigger (June 26): Spotted areas are present throughout central and southern Illinois, with breakage amounting to from 5 to 10 percent.

CORN ROOTWORMS (Diabrotica spp.)

South Carolina. W. C. Nettles (June 7): Specimens of Diabrotica sp. which caused starvation symptoms in barley were submitted. First time it has been noted in the State. A 40-acre field was involved, in which some spots several yards square would be affected and other spots equally large would be unaffected. Collection was made on May 10. (Det. by W. H. Anderson.) (June 24): The southern corn rootworm, (D. duodecimpunctata F.) is above average in injury.

Illinois. F. J. Bigger (June 26): A field near Elgin in northeastern Illinois was observed about June 10, where adults of the southern corn rootworm had eaten into the stems of about 5 percent of the plants so that central part of plant was killed; plants with lighter damage recovering.

Iowa. H. E. Jaques (June): The northern corn rootworm (D. longicornis Say) was found in Monona, Pocahontas, and Cedar Counties.

A MIRID (Thyrillus pacificus Uhler)

Idaho. W. E. Shull (June 20): Attacking winter and spring wheat and oats at Lewiston and American Falls, and causing temporary damage. Moving in from native grasses to margins of fields.

CORN

ARMYWORM (Cirphis unipuncta Haw.)

Iowa. H. E. Jaques (June): Light infestation in Cedar and Davis Counties, in the southeastern section of the State, and in Ida and Monona Counties in the west-central section; heavy infestation in Pottawattamie County in the southwestern section of the State.

Illinois. J. H. Bigger (June 26): Few small outbreaks occurred in central Illinois the last of May and first of June.

Maine. A. E. Brower (May-June): Unusually abundant at lights.

F. H. Lathrop (June 13): Moths were taken in quantities at light trap in Penobscot County during May. About 80 percent were gravid females.

Kentucky. W. A. Price (June 24): Spring armyworms did some damage during May to corn and small grain in several small areas.

Nebraska. H. D. Tate (June 20): Caterpillars sent in from Colfax County on June 12. Observed on wheat and oats in Butler County on June 10; also found on wheat in Seward County on June 12.

CORN EAR WORM (Heliothis armigera Hbn.)

Virginia. H. G. Walker and L. D. Anderson (June 27): Appear to be more abundant in sweetcorn in the Norfolk district than for several years. Many nearly full-grown larvae have been found feeding on the plants before they began tasseling.

South Carolina. O. L. Cartwright (June 6): Attacking corn from 1 to 2 feet high in top leaves or throat. Considerable injury observed in Florence, Lee, and Barnwell Counties.

Illinois. R. A. Blanchard, et al. (June 18): More abundant than usual in sweet corn in the market garden section near East Saint Louis.

Corn silking was 95 to 100 percent infested by June 2, and on June 16 there were from 1 to 5 larvae per ear. About 50 percent of the ears will be marketable.

Missouri. L. Haseman (June 25): On June 16, second, third, and fourth instars were observed feeding in the buds and tassels of sweet and pop corn. In one case 30 percent of the buds were attacked in pop corn.

Utah. G. F. Knowlton (June 4): Adults are abundant at Milford.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Connecticut. N. Turner (June 23): After the earliest pupation and emergence on record, there is apparently a lighter infestation than usual in corn. Moths are still present, and this late infestation may build up a larger population.

New York. N. Y. State Coll. Agr. News Letter (May 26): In the Hudson Valley emergence had reached the 30-percent level on May 24 and eggs were being laid on the earlier plantings of sweet corn. In one field eggs were already present on that date to the extent of 50 masses per 100 plants. Found the first borers in Rockland County on May 29. (June 9): Some fields showed as high as an average of 1 egg mass per plant in Columbia County in eastern New York on June 6, but most fields showed about 12 masses per 100 plants with egg laying continuing. (June 23): In western New York, 79 percent of the borers had pupated by June 20 in Monroe County. No moth emergence was observed.

Virginia. H. G. Walker and L. D. Anderson (June 27): The European corn borer is not so abundant in potatoes in Princess Anne County as it was last year. The hot dry spring seemed to prolong emergence, so that moths from the overwintering generation of borers were still present in the field when moths of the new generation began emerging from potatoes.

SOUTHERN CORNSTALK BORER (Diatraea crambidoides Grote)

Virginia. H. G. Walker and L. D. Anderson (June 27): Larvae of the southern cornstalk borer are rather abundant in several fields of early sweet corn in Norfolk and Princess Anne Counties.

South Carolina. O. L. Cartwright (June 5): Severely injured sections of two cornfields in Florence County.

Georgia. T. L. Bissell (June 13): At Experiment, corn which is from 11 to 26 inches tall is rather heavily infested. Some stalks were found with youngest leaf dead, other leaves slightly ragged, and large burrows in the base of the stalk. Such stalks have from one to three larvae, and one pupa was found.

FALL ARMYWORM (Laphygma frugiperda A. & S.)

Mississippi. T. F. McGehee (June 19): Found feeding in the bud of corn in Hancock County today.

LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zell.)

South Carolina. O. L. Cartwright (June 5): Sections of two cornfields in Florence County were damaged .

BILLBUGS (Calendra spp.)

South Carolina. O. L. Cartwright (June 5): Several fields of corn were rather heavily infested by C. callosa Oliv. and C. maidis Chitt. in Florence and Lee Counties.

Mississippi. C. Lyle (June 25): Specimens of C. callosa were received from Panola County on May 29 where they were taken from corn, and adults (probably C. cariosa Oliv.) were sent in from Harrison County on June 19.

Iowa. H. E. Jaques (June): Light infestations in Hardin County in the central part of the State, and in Henry and Davis Counties in the southeastern section.

SOD WEBWORMS (Crambus spp.)

Ohio. T. H. Parks (June 25): Serious injury occurred in a few isolated fields of central Ohio late in May, necessitating the replanting of some corn.

Iowa. H. E. Jaques (June): Light infestation in Floyd County and moderate infestation in Jones County.

Minnesota. M. W. Wing (May 20-June 19): Severely damaging parts of cornfields in Blue Earth County.

A SEED CORN BEETLE (Agonoderus sp.)

Wisconsin. C. L. Fluke (June 20): Cool, rainy weather of June 2 to 14 occurred just after planting and has given rise to attacks by corn seed ground beetles (Agonoderus sp.), especially in southern counties.

ALFALFA AND CLOVER

ALFALFA WEEVIL (Hypera postica Gyll.)

Nebraska. H. D. Tate (June 3): Adults were collected today from sweepings in an alfalfa field in Scotts Bluff County on June 3.

Wyoming. B. T. Snipes (June 21): Two fields of alfalfa at Basin were heavily attacked, one so badly that first hay crop was ruined and field is being plowed under. About 5 to 10 percent damage in second field.

Utah. G. F. Knowlton, et al. (May and June): Moderate to serious damage on alfalfa has occurred at Milford, Green River, Verdure, Skull Valley, Smithfield, and Murray.

CLOVER LEAF WEEVIL (Hypera punctata F.)

Iowa. H. E. Jaques (June): Light infestation in Davis County, in the southern part of the State.

Idaho. W. E. Shull (June 20): Always present on which Dutch clover but never serious until this spring at Caldesac, Nez Perce County, and Aberdeen, Bingham County.

Utah. G. F. Knowlton (June 20): A few adults were picked up among red clover and alfalfa at Pleasant Grove.

A WEEVIL (Hypera ramicis L.)

New York. N. Y. State Coll. Agr. News Letter (May 26): Small snout weevils were received from Nassau and Sullivan Counties during the past week. Found in very large numbers and reported as feeding destructively on sour grass in Nassau County. Introduced species formerly known only in Westchester County. (Det. by H. Dietrich.) (June 2): Slugs, pupae, and adults were found in destructive numbers on sour grass cultivated for seed near Farmingdale.

SWEETCLOVER WEEVIL (Sitona cylindricollis Fahr.)

Illinois. J. H. Bigger (June 26): Survey made May 26-28 showed that the range of the sweetclover weevil extended throughout the north half of the State. Abundant generally in northern third and killing out spring seedlings. Spotted severely infested areas near southern limits area. Sweetclover only plant attacked.

CLOVER ROOT CURCULIO (Sitona hispidula F.)

Utah. G. F. Knowlton (June 5): Abundant in one field of alfalfa at Ogden. Present throughout northern Utah on alfalfa but less abundant generally than last season.

GRAPE COLASPIS (Colaspis brunnea F.)

Illinois. W. P. Flint (June 23): Extensive injury to corn and soybeans on clover or soybean sod. First adult was noted in field on June 13 in central Illinois.

Missouri. L. Haseman (June 25): Beetle present in great numbers in lespedeza plantings in central Missouri.

CLOVER HAY WORM (Hypsopygia costalis F.)

Missouri. L. Haseman (June 25): Numerous moths appeared in central Missouri and were taken in codling moth bait jars during the last 10 days.

ZEBRA CATERPILLAR (Ceramica picta Harr.)

Utah. G. F. Knowlton (June): Larvae are seriously injuring alfalfa north of Honeyville, in Box Elder County.

THRIPS (Frankliniella spp.)

California. L. G. Jones (May 24): Damage to hay alfalfa in the Antelope Valley by F. occidentalis Perg. and F. moultoni Hood averaged well above 10 percent on all the second cutting, and the seed crop on small acreages was completely destroyed.

PLANT BUGS (Lygus spp.)

Arizona. W. A. Stevenson (June 14): Population of Lygus sp. is still on the increase in the Santa Cruz Valley, especially in alfalfa. A maximum of 163 specimens were taken per 100 net strokes, which is very high. Present also on Atriplex and Russian-thistle, which is spreading rapidly in this valley.

Nebraska. H. D. Tate (June 20): Specimens sent in from a garden in Harlan County on June 3 were identified as L. elisus Van D.

Utah. G. F. Knowlton (May 31): L. elisus was moderately abundant on potatoes and alfalfa at Plain City. (June 12): L. elisus and L. elisus hesperus Knight are abundant on canning peas in several fields adjoining recently cut alfalfa at Pleasant Grove, American Fork, Smithfield, Pleasant View, Orem, Payson, and Spanish Fork. (June 24): L. hesperus is damaging potato foliage adjoining recently cut alfalfa at Garland.

CLOVER MITE (Bryobia praetiosa Koch)

Virginia. S. B. Fenne (June 12): Every red clover leaf in Augusta County infested with mites; some curling and burning of the leaf edges. Damage light.

Utah. G. F. Knowlton (June 20): Injuring red clover at Pleasant Grove.

COWPEAS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Georgia. T. L. Bissell (June 11): Adults have been emerging from hibernation rather regularly since April 16. Large numbers were found puncturing stems of small cowpea plants and killing them. As many as 10 were found by 1 plant, most of them at the ground level, and the stems were riddled with holes. Leaves were also punctured. Stem injury has not been observed before.

COWPEA APHID (Aphis medicaginis Koch)

Georgia. T. L. Bissell (June 25): Heavily infested the stems, leaves, flowers, and pods of a few cowpea plants at Plains, Sumter County, on June 20. One leaf of a peanut plant nearby was also infested.

TIMOTHY

A MITE (Epitrimerus hystrix Nal.)

New Jersey. F. W. Poos (May 17): Specimens collected at Moorestown on May 14. Timothy badly infested with mites which are causing serious damage. (Det. by H.H. Keifer.)

F R U I T I N S E C T S

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

New York. D. W. Hamilton (June 23): Captures of adults in bait traps continued heavy through June 12 at Poughkeepsie, eastern New York. Since that time captures have lessened, although moths are still abundant in orchards. Larval entrances on untreated trees were moderately abundant from May 26 to June 7, and very abundant from June 7 to June 21.

N. Y. State Coll. Agr. News Letter (June 16): Activity generally normal in eastern New York; numbers of larvae have begun to enter fruit. In western New York egg deposit has been light. (June 23): In western New York larvae were beginning to do damage in Monroe County at the end of the week; activity in the lake zone is increasing.

Delaware. L. A. Stearns (May 26): First injury by first-brood larvae observed today at Bridgeville. (June 18): Peak of first-brood attack is past; injury is light to moderate.

Virginia. A. M. Woodside (June 23): First-brood infestation heavy in Augusta County, owing to dry weather throughout flight period of spring-brood moths. Most first-brood eggs have hatched, and some first-brood pupae are about mature.

Pennsylvania. H. M. Steiner (June 24): Emergence of adults from cages was complete on June 19. Cool, wet weather early in June checked attack at a critical period of hatching. First mature larvae captured in untreated bands on June 23.

Ohio. T. H. Parks (June 25): Moth activity reduced during the first 10 days of June, owing to climatic conditions. Conditions favorable since June 18; entrances now common on apples not well treated.

Indiana. L. F. Steiner (June 21): First-brood larvae are still hatching in small numbers. Larvae have been leaving apples since June 3; moth catches began to increase on about June 19. Average infestation

in well-treated orchards is above normal.

Illinois. W. P. Flint (June 23): First brood more abundant than usual.

Missouri. L. Haseman (June 25): A few first-generation moths observed throughout the State since June 1; in central Missouri the first emergence of second-generation moths was observed on June 24. Moths and larvae abundant.

Wisconsin. C. L. Fluke (June 20): Flights began in Door Peninsula on June 16, reaching a peak from June 18 to 20.

J. A. Callenbach (June 9): Flight of spring emergents is the lightest in Crawford County since 1935.

Washington. C. C. Alexander and E. J. Newcomer (June 19): Moths entered baits in large numbers in the Yakima area from May 19 to 25 and from June 8 to 12. Spring-brood adults are still emerging in fairly large numbers from cooler places. A period of high egg deposition occurred from May 21 to June 2. Larvae began entering fruit in large numbers on about June 4. The season started earlier than in 1940, but is now a week or 10 days later.

PISTOL CASEBEARER (Coleophora malivorella Riley)

Delaware. L. A. Stearns (May 29): Specimens and report of a considerable infestation in an apple orchard received from near Camden.

Pennsylvania. H. M. Steiner (June 24): First pupae observed on May 30 in Adams County; first adults emerged on June 16; and first eggs were observed on foliage on June 22. Emergence of moths more than 50-percent complete on June 23. Parasitization apparently heavier than that observed in previous seasons in orchards that have been heavily infested for several years.

Ohio. T. H. Parks (June 25): Serious injury to foliage of one orchard in Fairfield County for 2 or 3 years. Adults emerged throughout June, the peak occurring on about June 20. A few parasites are present. Eggs now present on foliage.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

New York. N. Y. State Coll. Agr. News Letter (June): Quite common and causing some injury. About full grown in Monroe County by June 9; nearly every pear injured in one orchard, not properly treated.

Indiana. L. F. Steiner (May 27): Injury at Vincennes less severe than in 1940. (June 4): Adults are now coming to traps at Vincennes in fairly large numbers.

Wisconsin. J. A. Callenbach (June 9): First adults collected from bait pans on May 31 in Crawford County. By June 6, approximately 30 percent of the larvae had pupated. Moderate to heavy damage on apples and sour cherries.

Missouri. H. E. Brown (June 25): Moths were still flying in small numbers on June 24, the peak of flight having occurred on June 7.

APPLE FLEA WEEVIL (Rhynchonotus pallicornis Say)

Ohio. T. H. Parks (June 25): Great increase in numbers in several orchards in central Ohio. A few years ago this insect was a major pest, then decreased in importance, and is now increasing again.

CRANBERRY ROOTWORM (Rhabdopterus picipes Oliv.)

Missouri. L. Haseman (June 25): Beetles, identified as the eastern cranberry rootworm, have been attacking grape foliage and fruit and apple foliage for the last 2 or 3 years in west-central Missouri. They have been active since the first week in June. A few of the beetles and some damage have appeared in central Missouri.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Connecticut. P. Garman (June 24): First emergence from field cages occurred on June 16.

New York. R. W. Dean (June 24): Emergence on apples in cages at Poughkeepsie began on June 14 and has been continuous, increasing on June 19 and 20, dropping on June 21, and rising again on June 22 and 23. Time of appearance of first fly was normal.

APHIDS (Aphididae)

New York. N. Y. State Coll. Agr. News Letter (June): In eastern New York the rosy aphid (Anuraphis roseus Baker) and the green aphid (Aphis pomi Deg.) have been scarce. In western New York both rosy and green aphids have been abundant, causing considerable injury in some orchards in Genesee, Monroe, and Cayuga Counties. Green aphids are also serious in Wayne and Niagara Counties.

Virginia. A. M. Woodside (June 23): Rosy apple aphid has caused light damage in some commercial orchards in Augusta County. Practically all aphids have left apple.

Indiana. L. F. Steiner (June 4): A marked decrease in abundance of the rosy aphid occurred during the last week at Vincennes. Adults are leaving apple trees.

COMSTOCK'S MEALYBUG (Pseudococcus comstocki Kuw.)

Connecticut. P. Garman (June 24): Infestation general on pears in Fairfield County.

Virginia. G. J. Haussler (June 20): Adult females of the first generation were observed in apple orchards of Albemarle County on June 1, about 8 days earlier than this stage was first observed in 1940. Females found ovipositing on June 10, and eggs of the second generation are very abundant in many orchards. No eggs have hatched.

The first generation is apparently somewhat more abundant than last year in some orchards in Botetourt and Clarke Counties. Deposition of second-generation eggs appeared to be beginning on June 18 in Clarke County.

West Virginia. G. J. Haeussler (June 17): Most of the first-generation females are in the adult stage in orchards in Berkeley and Jefferson Counties. Most of them are still feeding, but a few have begun to oviposit.

South Carolina. W. M. Upholt (June 2): First-generation adults are laying large numbers of eggs on untreated apple trees at Clemson.

APPLE LEAF-ROLLING MIDGE (Dasyneura mali Kieff.)

New York. N. Y. State Coll. Agr. News Letter (June 16): Found in 22 orchards scattered over Monroe County, western New York.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Maine. F. H. Lathrop (May): Light to heavy infestations reported on apple in York County; damage negligible.

Pennsylvania. H. M. Steiner (June 24): Development of large populations observed in late May in Adams County orchards was retarded, owing to prolonged wet periods. Although there was rain during the first week in June, when large numbers of mites were hatching, and during the third week, when adults were laying eggs, there are still sufficient numbers present to cause trouble.

Ohio. T. H. Parks (June 25): Apple orchard in Ashtabula County found heavily infested on June 10. Foliage had already turned gray. Treated orchards are only normally infested.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (June 24): Less abundant than usual in peach twigs. Some larvae are already in fruit, owing to hardening of twigs as a result of dry weather.

New York. N. Y. State Coll. Agr. News Letter (June 23): Little activity in western New York up to June 20. Entrances can be found in both twigs and fruit, but the number of fruit entries is not excessive for the first brood, as was the case in 1940.

Delaware. L. A. Stearns (May 26): Maximum activity of first-brood larvae is occurring now throughout the State; brood is about two-thirds developed, and twig injury is severe.

Virginia. A. M. Woodside (June 23): Second-brood infestation lighter than usual in Augusta County.

Georgia. O. I. Snapp (June 18): Infestation at Fort Valley, central Georgia, is about that of an average year; this insect is not economically important in commercial orchards at Fort Valley.

PLUM CURCULIO (Conotrachelus nonuphar Hbst.)

Pennsylvania. H. M. Steiner (June 24): Peak of emergence of larvae from dropped peaches occurred on June 9 in Adams County. First adults emerged from soil beneath infested trees on June 23. Late injuries to fruits are more common than in 1940, but the number of larvae per tree is about equal to that of 1940 in a test orchard near Flora Dale, Adams County.

Georgia. O. I. Snapp (June 18): In the insectary at Fort Valley the first pupation of the season occurred on May 23, 6 days earlier than in 1940. First transformation to adults was recorded on June 2, 10 days earlier than last year. New adults began to emerge on June 5, 13 days earlier than last year. Peak of emergence of new beetles on June 11 was 11 days earlier than last year. In commercial peach orchards emergence began on June 9. Development of peach crop is considerably later than the development of the plum curculio. Infestation, as revealed by jarring records, is heavier than that of 1940. Marked increase in number of adults in orchards in mid-June, owing to emergence of new adults from the soil.

Tennessee. G. M. Bentley (June 24): Found in home orchards throughout the State, where treatments have not been applied.

Mississippi. C. Lyle, et al. (June 25): Injury on treated trees reported from the Grenada district and northeastern counties. Heavy infestations on untreated trees reported from around Meridian, as well as some injury to peach in the Jackson district, and to peach and plum at different places in the Durant area.

Missouri. L. Haseman (June 25): Practically no evidence of damage in central Missouri during June.

Nebraska. H. D. Tate (June 20): Quite common in cherries in Lancaster County.

A PLANT BUG (Lygus sp.)

Illinois. C. L. Metcalf (June 26): Reported from north-central Illinois as destroying the fruits of peaches when about 3/4 inch in diameter late in May and early in June.

PEAR

PEAR PSYLLA (Psylla pyricola Foerst.)

New York. N. Y. State Coll. Agr. News Letter (June): Very numerous throughout the fruit-growing sections of the State. Some nymphs were in the hardshell stage in Orange County by June 23. Second-generation nymphs are pretty well hatched in Orleans County.

CHERRY

CHERRY FRUITFLIES (Rhagoletis spp.)

New York. N. Y. State Coll. Agr. News Letter (June 2): First specimen of R. fausta O. S. was taken from a cage near Hudson, eastern New York, on May 26, whereas R. cingulata Loew first emerged on June 6.

BLACK CHERRY APHID (Myzus cerasi F.)

New York. N. Y. State Coll. Agr. News Letter (June 9): Numerous and causing damage in Chautauqua and Niagara Counties, western New York.

Ohio. T. H. Parks (June 25): Infestation on sweet cherries in some plantings during the early part of June.

Indiana. J. J. Davis (June 23): Reported on June 2 as very abundant at South Whitley.

CHERRY LEAF MINER (Profenusa canadensis Marlatt)

New York. D. W. Hamilton (June 23): Injury more frequent than usual throughout plantings in the Hudson River Valley. Specimens of leaf injury received from Niagara County, in western New York.

Missouri. A. C. Burrill (May 7): Ninety percent of the leaves of Crataegus sp. in a planting at Jefferson City have been destroyed. (Tentatively det. by R. A. Cushman from injured leaf.)

A THRIPS (Frankliniella occidentalis Perg.)

Oregon. S. C. Jones (June 5): Collected from cherry near The Dalles, where it is causing some russet. Also reported as diminishing the set of fruit. (Det. by J. C. Crawford.)

RASPBERRY

RASPBERRY CANE BORER (Oberea bimaculata Oliv.)

New York. F. G. Munding (June 12): Beetles are just beginning to oviposit and to cut the tips of raspberries at Naples.

Ohio. E. W. Mendenhall (June 11): Present in raspberry plantations in Fairfield County, but not much damage caused..

Kentucky. W. A. Price (June 24): Considerable injury caused to new red raspberry canes at Lexington during the second week in June.

Wisconsin. E. L. Chambers (June 28): Unusually abundant throughout the State during June.

A LEAF BEETLE (Cryptocephalus castaneus Lec.)

California. G. S. Kido (June 25): The castaneus beetle, ordinarily a very minor insect on raspberry in the Sacramento Valley, broke out in sufficient numbers to do damage on commercial plantings in Los Gatos. Insect was reported on June 7.

CURRENT

IMPORTED CURRENT WORM (Pteronidea ribesii Scop.)

New York. N. Y. State Coll. Agr. News Letter (June 2): Abundant and doing considerable damage to currents in Orange and Ulster Counties, eastern New York.

Pennsylvania. T. L. Guyton (June 16): Observed at Coatesville.

CURRENT APHID (Capitophorus ribis L.)

Wisconsin. E. L. Chambers (June): Very abundant generally throughout the State.

Minnesota. M. W. Wing (June 19): Abundant in Stearns County about 2 weeks ago.

Utah. G. F. Knowlton (June 15): Leaves of red current crinkled on some bushes at Farmington.

A BORER (Conopia tipuliformis Clerck)

New York. F. G. Munding (June 7): Adults are ovipositing on currents at Geneva and damaging cones.

AN APHID (Aphis varians Patch)

Utah. G. F. Knowlton (June): Apical leaves of black current curled and nearly matured fruits attacked at Smithfield on June 16. On June 21 apical leaves, petioles, and ends of twigs of black and yellow current were observed to be attacked at Farmington, Kayville, and Salt Lake City. Black currents were being attacked at Brigham and North Ogden on June 18.

RASPBERRY SAWFLY (Blennocampa rubi Harr.)

Delaware. J. M. Amos (May 19): Blackberries, being damaged at Bethel by what was reported as a caterpillar, were found to be damaged by this sawfly. Larvae were about full grown, a few being in the prepupal stage. Approximately one-fourth of the plants in an 8-acre field were completely stripped of foliage, and the larvae were eating the buds and green berries.

GRAPE

GRAPE BERRY MOTH (Polychrosis viteana Clem.).

New York. N. Y. State Coll. Agr. News Letter (June 23): Adults have been emerging rapidly during the latter part of the week of June 16-22 throughout the grape belt of Chautauqua County.

Pennsylvania. B. D. Gleissner (June 16): Mortality of overwintered pupae is only 12 percent in Erie County. Spring parasite emergence was about 5 percent, three to five times greater than normal. First moths caught in vineyards on light soil on May 26, and in vineyards on clay soils on June 3. Temperatures during the early egg deposition were unfavorable.

Ohio. T. H. Parks (June 25): Adults emerged late, but considerable injury was caused by first-brood larvae in a vineyard in Franklin County.

GRAPE ROOTWORM (Fidia viticida Walsh)

Missouri. L. Haseman (June 25): Noticeable injury to foliage of grapes throughout central and west-central Missouri since early in June; a few adults are still active.

GRAPE LEAFHOPPER (Erythroneura comes Say)

New York. N. Y. State Coll. Agr. News Letter (June 23): Eggs have begun to hatch in Chautauqua County, and the first nymphs were found on June 17. Many overwintered adults can be found in some vineyards.

Pennsylvania. B. D. Gleissner (June 16): First hatch of eggs was observed in Erie County on June 15, as compared to June 22 in 1940. Population smaller than in 1940; Damage is light.

PECAN AND WALNUT

WALNUT CURCULIO (Conotrachelus juglandis Lec.)

Missouri. L. Haseman (June 25): Most of the light crop of walnuts on some trees in central Missouri are falling, owing to damage. They began falling in the middle of June.

PECAN CIGAR CASEBEARER (Coleophora caryaefoliella Clem.)

Oklahoma. F. A. Fenton (June 24): Found at Porum on June 17.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Oklahoma. R. G. Dahms (June 22): Observed on pecan trees in Comanche County.

PECAN LEAF CASEBEARER (Acrobasis juglandis LeB.)

Mississippi. T. F. McGehee (May 22): Specimens collected on pecan in Harrison County.

BLACK PECAN APHID (Melanocallis caryaefoliae Davis)

Georgia. T. L. Bissell (June 25): Conspicuous yellow spots produced on pecan trees in Lamar County. Very few aphids present on June 18;

Mississippi. M. L. Grimes (June 25): Heavy infestation observed in Clarke County.

PECAN PHYLLOXERA (Phylloxera devastatrix Perg.)

Mississippi. C. Lyle (June 25): Injured twigs received from Coahoma, Jefferson, Tallahatchie, Warren, Washington, and Yazoo Counties between May 20 and June 20. Damage is very serious.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Florida. H. T. Fernald (June 21): Second generation of adults are now appearing at Winter Park, in central Florida.

FLORIDA RED SCALE (Chrysomphalus aonidum L.)

Florida. W. Mathis (June 23): Reproduction is increasing rapidly on the lower east coast.

BLACK SCALE (Saissetia oleae Bern.)

California. R. S. Woglum (June): Situation generally the most satisfactory for many years. Comparatively little difference between coastal and interior districts. Highest infestations found in eastern San Bernardino County, especially on grapefruit, but even here percentage of commercial orchards affected is not large.

YELLOW SCALE (Aonidiella citrinus Coq.)

California. R. S. Woglum (June): Slight increase over last year in eastern San Bernardino County, but not serious. The parasite, Comperiella sp., appears to have been much less effective than in previous years.

PURPLE SCALE (Lepidosaphes beckii Newm.)

California. R. S. Woglum (June): Heaviest build-up of any scale insect over last year, occurring not only in individual orchards but spreading into orchards not previously infested in Orange and southern Los Angeles Counties. Apparently a serious problem in the coastal areas of these two counties. Spring hatch has started.

CITRICOLA SCALE (Coccus pseudomagnoliarum Kuw.)

California. R. S. Woglum (June): Numbers have decreased since 1940. Very few orchards are badly infested, most of them being in eastern San Bernardino County. Hatching under way for a month. In central California this scale has been a problem to more growers than for many years. Hatch has been heavy since early in May.

CITRUS THRIPS (Scirtothrips citri Moul.)

California. R. S. Woglum (June): Although causing light damage to some fruit, damage is generally the lightest for many years in central California. Fruit scarring has appeared for over 2 weeks in some untreated groves in southern Tulare County. In southern California numbers have been increasing in most lemon districts of Los Angeles, San Bernardino, and Riverside Counties.

A RUST MITE (Anychus clarki McG.)

Texas. C. O. Gingrass (June 19): Citrus severely attacked in Hidalgo County.

PAPAYA

A HORNWORM (Erynnis sp.)

Florida. W. Mathis (June 23): The first papaya hornworm for the season was noticed today on a papaya plant at the laboratory at Saint Lucie, on the lower east coast.

TRUCK - CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Klug)

Mississippi. C. Lyle (May 26): Adults were taken from cabbage and tomato in Warren County today.

Texas. D. C. Parman (June 24): Made its first appearance today at Uvalde and was very destructive to gardens during the winter and early spring. Carrots and tomatoes were severely damaged.

PALE-STRIPED FLEA BEETLE (Systema blanda Molsh.)

Ohio. T. H. Parks (June 25): Seriously damaged commercial bean plantings in Columbiana and Mahoning Counties.

Georgia. T. L. Bissell (June 7): Beetles have just about disappeared in the Piedmont region where they were present last month. Fifteen counties, from Hall southwestward to Meriwether, reported damage, or presence of beetles, most of which attacked cotton. Cotton has fully outgrown the injury, which was mainly on the first (cotyledonary) leaves. Beetles were observed in Spalding, Pike, Meriwether, Coweta, and Fayette Counties, and reported from Butts County.

STRIPED CUCUMBER BEETLE (Diabrotica vittata F.)

Maine. A. E. Brower (June): Very troublesome about Augusta.

Massachusetts. A. I. Bourne (June 23): Present in normal abundance.

New York. N. Y. State Coll. Agr. News Letter (June 23): Usual damage in the lower Hudson Valley and in western New York.

Virginia. S. B. Fenne (June 10): First beetle noted on cucumber today at Blacksburg. Appeared suddenly in large numbers, causing light damage.

Missouri. L. Haseman (June 25): Less abundant than usual, but numerous in central Missouri; also reported from other parts of the State.

Minnesota. A. G. Ruggles and assistants (May 20-June 19): Very abundant in Ramsey, Scott, Le Sueur, and Faribault Counties, and moderately abundant in Pope, Renville, Sibley, Watonwan, and Lincoln Counties, all in the southern half of the State.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

California. C. C. Deonier (June 16): Heavy flight was observed at Nice on the morning of June 3, and during the following 2 weeks they were frequently reported damaging flower and vegetable gardens. Thousands of adults were observed on a severely damaged hedge at Lucerne on the evening of June 10. Terrific damage reported at places on the lower part of the lake. Beetles have fed heavily on alfalfa, fig leaves, and all garden stuff.

BLISTER BEETLES (Meloidae)

- Massachusetts. A. I. Bourne (June 23): Specimens of Pomphopoea sayi Loe. and reports on the damage caused to lupines by this beetle were received from Berkshire County, Williamstown in the northern part and from Stockbridge in the southern part. One report stated that in less than 3 days the beetles had reduced an exceptionally good planting of English lupines to mere stems, stripping both the flowers and foliage and preferring the tip ends of the flower spikes.
- West Virginia. F. W. Craig (June 18): A number of Chinese elms in Charleston were rather seriously damaged during the week of June 9-14. Outbreak reported as occurring in a small field of alfalfa in Mason County.
- Ohio. T. H. Parks (June 28): Epicauta cinerea Forst. very abundant generally in alfalfa fields where they are feeding on the plants.
- Kentucky. W. A. Price (June 24): Black blister beetles, Epicauta pennsylvanica (Deg.), were destructive to alfalfa at Louisa.
- Alabama. J. M. Robinson (June 16): E. vittata was reported as active on vegetables at Demopolis and on beans at Auburn and Selma. (June 21): Epicauta sp. reported as active on soybeans at Anniston and on tomatoes at Alpine.
- Mississippi. C. Lyle, et al. (June 25): Worst outbreak of the southern striped blister beetle (E. lohniscata F.) ever recorded occurred during the latter part of May and the first half of June. Specimens were received from many counties in the eastern half of the State, where they were feeding on practically everything. (June 25): Specimens of the ash-gray blister beetle (Macrobasis unicolor Kby.) were received on June 19 from Choctaw County, where they were feeding on soybeans. Beetles probably belonging to this species were reported injuring soybeans in Jackson County on June 18.
- Nebraska. H. D. Tate (June 20): E. pennsylvanica and E. maculata (Say) were found in alfalfa in Hitchcock County on May 21. Macrobasis unicolor Kby. were found in Buffalo County on May 21, and M. immaculata Say were found flying around lights in Redwillow County on May 20.
- Missouri. A. C. Burrill (June 4-6): The gray blister beetle (Epicauta cinerea Forst.) made its first appearance, and in 2 days ate off leaflets from top leaves of several 8-to 15-foot trees of Albizia julibrissin, shade trees along Moreau Drive, Jefferson City; as high as 60 or more beetles per tree; kept flying from lawns to gather on the trees on afternoon of June 4 and were often nating that evening and next day.
- Texas. R. K. Fletcher (May 19): E. pennsylvanica found on potatoes in Cass County.

Arizona. C. D. Lobert (June 21): Several swarms of the blister beetle (E. pardalis Lec.) were observed in the Wilcox area. No crop damage as yet. The beetles were in flight and settling on mesquite trees in the range.

SEED-CORN MAGGOT (Hylomya cilicrura Rond.)

New York. N. Y. State Coll. Agr. News Letter (June 9): Abundant and destructive in both lower Hudson River Valley and western New York.

Michigan. E. I. McDaniel (June 11): Prevalent throughout the State. Reported working in sprouting potatoes at Crystal Falls, and killing about 15 acres of corn in the vicinity of Lansing. Sweepings in alfalfa fields around Benton Harbor produced about 600 individuals, in 200 sweepings with an ordinary 1-foot net.

Utah. G. F. Knowlton, et al. (May 30): Seed-corn maggot has killed nearly all lima beans, has seriously reduced stand of young peas and corn, and largely destroyed melon seed at Pintura. (June 3): Adults very abundant in peafields at Pleasant Grove, Mapleton, and Payson. Injury has necessitated replanting of 3 fields of lima beans in the Spanish Fork-Payson area. (June 12): Damaged heavily manured squash seeds, destroying much of the germinating seed in a large patch at American Fork, and late plantings of lima beans in numerous fields in Utah County, particularly near Spanish Fork. (June 14): Six acres of Hubbard squash and banana squash planted at Roosevelt were largely destroyed by heavy infestations.

FALSE CHINCH BUGS (Nysius ericae Schill.)

North Dakota. J. A. Munro (June 23): Destroyed 10 acres of seedling flax at Barton, in Pierce County.

Utah. G. F. Knowlton, et al. (May 21): Causing moderate injury to corn and other garden crops, being most abundant on radishes and turnips at Minersville and Milford.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Texas. R. K. Fletcher (June 17): Breeding widely on field peas and causing injury to peaches in Robinson County, also damaging sweet corn and tomatoes on June 15.

RED-SHOULDERED PLANT BUG (Thyanta custator F.)

Utah. G. F. Knowlton (June 21): Collected on canning peas at Pleasant Grove, Heber, Kayville, and Spanish Fork, and on tomato plants at Layton. Fairly abundant in some places.

GARDEN CENTIPEDE (Scutigera innaculata Newp.)

Utah. G. F. Knowlton, et al. (June): Reported as damaging pole beans, onions, lettuce, potatoes, cucumbers, cantaloups, radishes, corn, asparagus, and peas at Smithfield, Bountiful, Magna, Salt Lake City, and Payson.

California. M. W. Stone (June 24): Destroyed 10 out of 30 acres of lima beans in the seedling stage in a field at Carpinteria, Santa Barbara County. Remainder of plants were severely damaged.

PILLBUGS (Oniscidae)

Mississippi. G. L. Bond (June 25): Very numerous and doing serious damage to beans, butterbeans, peppers, tomatoes, and other vegetables on June 14 in a garden in Jackson County.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa deceunlineata Say)

New York. N. Y. St. Coll. Agr. News Letter (May and June): Very numerous on potatoes and tomatoes in eastern New York and on Long Island the last week in May, and causing considerable damage in Albany County. The next week there were egg masses present and by June 9 the larvae had started to hatch. Eggs were observed in Dutchess County on June 5. Adults are rather scarce in Rockland County. In the western part of the State, in Orleans, Oswego, and Monroe Counties, the adults have been more numerous.

Tennessee. G. M. Bentley (June 4): Caused complete defoliation of potato plants at McMinnville, Warren County.

Missouri. L. Haseman (June 25): Second-generation beetles began emerging in central Missouri by the middle of June, but few eggs were deposited up to June 24.

Minnesota. A. G. Ruggles and assistants (May 20-June 19): Very abundant in Itasca, Todd, Stearns, Le Sueur, and Scott Counties, moderately abundant in Renville, Sibley, Brown, Watonwan, and Houston, and scarce in St. Louis, Faribault, and Lincoln Counties.

Iowa. H. E. Jaques (June): Light to heavy infestations in scattered counties throughout the State.

North Dakota. H. S. Telford (June 23): Light infestations have occurred on potatoes at Hillsboro and at Grand Forks and vicinity.

Nebraska. H. D. Tate (June 20): Reported from Harlan County on May 29. Large numbers observed on potatoes and considerable numbers of eggs present in experimental gardens in Lancaster County on May 16. Noted that they were stripping leaves on potatoes in Butler County on June 10.

Texas. J. N. Roney (June 24): Found on potatoes and tomatoes in Brazos County today.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Vermont. H. L. Bailey (June 23): Extremely abundant on tomato and potato plants in Washington County, early in June.

Connecticut. N. Turner (June 23): At Mount Carmel damage is continuing and infestations on potatoes and tomatoes are heavy.

Pennsylvania. B. F. Coon (June 21): Population at Lancaster is smaller than in previous years and injury to tobacco and potato crops is less than normal.

Virginia. L. D. Anderson and H. G. Walker (June 27): New brood is very abundant and causing severe damage in many potato fields on the Eastern Shore.

Nebraska. H. D. Tate (June 20): Beetles present on potatoes in large numbers and considerable injury was apparent in Lancaster County on May 16.

Utah. G. F. Knowlton (June 2): Damaging potatoes at Highland and Alpine today. (June 6): Beetles have injured potato and tomato foliage at Perry and potato foliage at Smithfield.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Virginia. H. G. Walker and L. D. Anderson (June 27): More abundant in potato fields than usual at Norfolk, on the Eastern Shore.

Missouri. H. E. Brown (June 15): Observed for first time today in large numbers on potatoes.

Minnesota. A. G. Ruggles and assistants (June): Moderately abundant in the south-central section of the State.

Iowa. H. E. Jaques (June): Light to moderate infestations in the southeastern, central, and western sections of the State.

Texas. J. N. Roney (May 23): Reported on beans and potatoes in Brazos County.

POTATO PSYLLID (Paratrioza cockerelli Sulc)

Montana. D. J. Pletsch (June 20): Sweeps in early potato plantings (May 1) show about three times as many adult psyllids as at this time in 1940. First definitely diseased plants were noted today near Billings, Yellowstone County. Nymphs found on leaves were in the second and third instars.

TARNISHED PLANT BUG (Lygus pratensis oblineatus Say)

Virginia. H. G. Walker and L. D. Anderson (June 27): Rather abundant in many potato fields on the Eastern Shore.

TOMATO FRUITWORM (Heliothis armigera Hbn.)

South Carolina. W. M. Upholt (June 25): Damage to tomatoes has been reduced to about 3 or 4 percent in Orangeburg and Bamberg Counties, and to 6 to 8 percent in Beaufort County.

Alabama. J. M. Robinson (June 5): Reported as active on tomatoes today at Perryville.

Mississippi. C. Lyle (June 25): Reported as injuring corn and tomatoes in most sections of the State.

Indiana. J. J. Davis (June 23): Tomato fruits were being damaged at Washington, Daviess County, on June 10, the worms being only a week old. Indications are that the species overwintered safely in southern part of the State.

TOMATO WORMS (Protoparce spp.)

South Carolina. W. M. Upholt (May 30): Light damage by hornworms is beginning to show up on tomatoes grown in experimental plots at Edisto Station, Barnwell County.

Utah. G. F. Knowlton (June 21): The tomato hornworm has damaged a few tomato plants west of Layton.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

Connecticut. N. Turner (June 23): Eggs now hatching. Normal damage on garden beans.

New York. N. Y. State Coll. Agr. News Letter (June 16): Adults are causing some injury on Long Island and in the lower Hudson River Valley. Observations indicate the beetles are appearing 10 days earlier than last year in western New York; overwintering beetles are appearing in larger numbers than in the last 2 years, and egg masses are present.

Virginia. L. A. Hetrick (June 6): Adults are flying and injury is beginning to show up on bean foliage at West Point.

Pennsylvania. G. B. Sleesman (June 17): Numerous on beans in the Philadelphia area.

South Carolina. W. C. Nettles and F. Sherman (June 24): Below normal thus far this season.

Georgia. T. L. Bissell (June 19): Becoming injurious at Experiment. (June 20): Very light damage on bunch beans at Plains, Sumter County.

Mississippi. C. Lyle, et al. (June 25): Specimens received from Jasper, Neshoba, and Wayne Counties, with reports of injury from Scott, Leake, and Winston Counties. Specimens were found in Grenada County the first week in June and in Tate County on June 11. Unusually light infestation in the northeastern counties and light to heavy in the Meridian area.

Tennessee. G. M. Bentley (June 16): Found on garden beans at Greenfield, Weakley County, today. Ten-percent defoliation.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

West Virginia. L. M. Peairs (June 13): Reported as present on beans in large numbers in Wetzel County.

Indiana. J. J. Davis (June 23): Reported as abundant on beans at Ambia on May 27.

Illinois. W. P. Flint (June 23): Very abundant and has caused considerable ragging of young soybean leaves. Larvae have injured some plants by feeding on the stalks and roots.

Mississippi. C. Lyle and assistants (June 25): Reported as still causing injury to beans in Scott County and the Durant area.

LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zell.)

Georgia. T. L. Bissell (June 25): A few bean plants were killed on May 30 at Experiment. Some damage occurred at Tifton on June 13 and serious damage at Experiment on June 14.

THREE-CORNERED ALFALFA HOPPER (Stictoccephala festina Say)

Mississippi. C. Lyle (June 25): Number of nymphs were feeding on pole beans in Choctaw County.

PEAS

PEA APHID (Macrosiphum pisi Kltb.)

New York. N. Y. State Coll. Agr. News Letter (June): Not very numerous in eastern New York. In the western part of the State they had been light in numbers until the middle of the month, when they became a serious problem on canning peas in upper Livingston and western Genesee Counties. Since the heavy rains, the populations have fallen off and danger from further injury seems past. Aphids remain numerous in Wayne County.

Ohio. T. H. Parks (June 25): Serious injury to peas in Pickaway County. Reported from Canal Winchester, Franklin County.

Indiana. P. T. Ulman (June 10): Reported as causing heavy damage to pea crop at Indianapolis. One canner reported that there were at least several bushels of ladybugs, the most common (95 percent) being Hippodamia convergens Guer., around the pea sheller.

Wisconsin. J. E. Dudley, Jr. (June 16): Infestation on peas in Dane County has been greatly cut down, owing to heavy continued rains June 7 to 14. Fungus disease has also been a factor.

Minnesota. A. G. Ruggles and assistants (May 20-June 19): Moderately abundant in Lake of the Woods County.

Nebraska. H. D. Tate (June 20): Found to be abundant in alfalfa fields in Sarpy, Buffalo, Hitchcock, and Furnas Counties on May 23.

Utah. G. F. Knowlton (June): Moderately abundant on alfalfa throughout the State the latter part of May. Found on peas in Utah County on June 2, and at Smithfield, Cache County, on June 6. By June 20 they had become more numerous and very destructive to canning peas at Pleasant Grove, in Utah County; at Smithfield; at Saline, Sevier County; Gunnison, in Sanpete County; and at Nephi, in Juab County. From 10 to 18 percent of the third-instar aphids in Davis County were parasitized by braconids.

PEA WEEVIL (Bruchus pisorum L.)

Utah. G. F. Knowlton (June): Abundant in some fields at Vineyard, Payson, American Fork, Highland, Alpine, Kayville, and Spring Lake. First eggs were found on June 3 at Ogden and Pleasant Grove.

THRIPS (Thysanoptera)

Utah. G. F. Knowlton (June): In northern Utah thrips have been causing much injury to foliage and pods of peas, as well as in Cache; Box Elder, Weber, and Utah Counties. At Hopper, in Weber County, and at Tremonton, Box Elder County, they were also infesting early tomato blossoms.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

New York. N. Y. State Coll. Agr. News Letter (June): On Long Island nearly full-grown worms were found on cabbage on May 26. They were also present in Rockland County. By June 16 they were plentiful in Ulster County and the butterflies were numerous. In western New York cabbage worms and butterflies have been scarce.

Pennsylvania. B. F. Coon (June 18): Adults appeared on cabbage at Lancaster and young larvae are beginning to cause noticeable injury in garden plots.

Missouri. L. Haseman (June 25): Heavy increase in central Missouri during June.

Iowa. H. E. Jaques (June): Light to moderate infestations in scattered counties throughout the State, with a heavy infestation in Louisa County, in the southeastern section.

Nebraska. H. D. Tate (May 30): Reported as destroying cabbage in untreated areas in Lancaster County.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia. L. A. Hetrick (June 7): A few adults are present on turnip foliage at West Point.

South Carolina. W. C. Nettles and F. Sherman (June 24): Very heavy infestation on rape and collards in Allendale, in the southern part of the State.

Mississippi. C. Lyle, et al. (June 25): Specimens received from Montgomery County on June 4. Heavy infestations reported in the Jackson district, Leake County, the Meridian district, and in Tate County.

New York. N. Y. State Coll. Agr. News Letter (June): Severe maggot injury in Nassau, Rockland, Albany, and Ulster Counties, in eastern New York. About 90 percent of the maggots had pupated by June 9 after one of their most destructive seasons. In western New York injury has also been severe, with the worst infestation in years in Orleans County.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Maine. A. E. Brower (June 18): Abundant and troublesome on squash and cucumbers.

New York. N. Y. State Coll. Agr. News Letter (June 23): Squash bugs have appeared in lower Hudson River Valley, but no eggs have been observed.

Georgia. T. L. Bissell (June 6): Eggs are common on squash plants today at Vaughn, Spalding County.

Mississippi. C. Lyle, et al. (June 25): Specimens were received from Simpson County on June 16. Reported as unusually abundant in Jackson County, with heavy damage to squash in the Meridian area and in Sunflower County.

Iowa. H. E. Jaques (June): Light to moderate infestations in the eastern and western sections of the State.

Missouri. L. Haseman (June 25): Numerous in many gardens during the latter part of the month.

Nebraska. H. D. Tate (June 20): A request for information on control of squash bug was received from Knox County on May 26.

Texas. R. K. Fletcher (June 24): Reported on squash in Brazos County on May 25 and in Grimes County on June 4.

Utah. G. F. Knowlton (June): Abundant at Salt Lake on June 11. Reported as abundant and injuring very young squash and pumpkins at Pleasant Grove on June 20. Large numbers are mating and eggs have been laid on the first leaves produced.

SQUASH BEETLE (Epilachna borealis F.)

Virginia. L. A. Hetrick (June 23): Adults were noted on foliage of squash plants in a garden near West Point.

Mississippi. C. Lyle (June 25): Injuring pumpkins in Bolivar County on June 3. Specimens received from Madison County on June 14.

MELONS

PICKLEWORM (Diaphania nitidalis Stoll.)

South Carolina. O. L. Cartwright (June 27): First larvae of season about half grown on squash at Clemson.

Mississippi. C. Lyle, et al. (June 25): Reported as present in Copiah County and causing some damage in the Meridian area.

IMBRICATED SNOUT BEETLE (Epicaerus imbricatus Say)

Indiana. J. J. Davis (May 29): Reported as damaging watermelons at Pekin today. (Det. by L. L. Buchanan.)

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Massachusetts. A. I. Bourne (June 23): Reported and observed in normal abundance.

New York. N. Y. State Coll. Agr. News Letter (June 9): Causing considerable damage in western New York.

South Carolina. D. Dunavan (June 23): Small colony of beetles exists in a local garden at Clemson and has been reproducing continuously since early spring. Believe this is the first permanent infestation in this part of the State.

Utah. G. F. Knowlton (May 30): Damaged asparagus at Sunset, Layton, and North Farmington. (June 10): Damaging asparagus at Plain City and Layton.

SPINACH

SPINACH LEAF MINER (Pegomya hyoscyami Panz.)

- Massachusetts. A. I. Bourne (June 23): Reported from many sections of the State as generally present in unusual abundance.
- Rhode Island. B. Eddy (June 16): Prevalent in chard and beet leaves at Providence.
- Wisconsin. C. L. Fluke (June 20): Generally distributed in commercial sugar-beet fields in Brown County.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

- Virginia. H. G. Walker and L. D. Anderson (June 27): Much more abundant than usual on cabbage and onions on the Eastern Shore.
- New York. N. Y. State Coll. Agr. News Letter (June 16): Injury appearing on Long Island, and in Wayne County in western New York.

SWEETPOTATO

TORTOISE BEETLES (Cassidinae)

- South Carolina. W. C. Nettles and F. Sherman (June 24): Two species were reported as injuring sweetpotatoes in York County, in the central part of the State.
- Mississippi. C. Lyle, et al. (June): Sweetpotatoes were being injured by an undetermined species in the Meridian area; by Chelymorpha cassidea F. in Amite, Choctaw, Madison, and Noxubee Counties; by Chirida guttata Oliv. in Montgomery County; by Metriona bicolor F. in Copiah County; and by M. bivittata Say in Montgomery County.

A MILKWEED BEETLE (Chrysochus auratus F.)

- Alabama. J. M. Robinson (June 23): Reported as destroying foliage on a patch of sweetpotatoes at Fort Payne.

STRAWBERRY

STRAWBERRY LEAF ROLLER (Ancyliis comptana Froel.)

- Ohio. E. W. Mendonhall (June 11): Causing some damage in a raspberry plantation in Fairfield County.
- Nebraska. H. D. Tate (June 20): Observed as numerous on leaves of strawberry plants on May 29 in Lancaster County.

A LEAF ROLLER (Cacoecia obsoletana Walk.)

Ohio. T. H. Parks (June 25): Specimens, together with injured leaves, were received from Kenton on May 29. We rarely receive this species.

STRAWBERRY CROWN BORER (Tyloderma fragariae Riley)

Kentucky. W. A. Price (June 24): Injured or killed plants were common in new patches the latter part of June in the Louisville berry area, where 78 percent of the plants in a 3-year-old patch were found infested.

SPITTLE BUGS (Philacnus spp.)

Connecticut. P. Garman (June 24): Many species are present and more numerous than usual on shrubbery and low-growing plants in New Haven County.

Delaware. L. A. Stearns (June 3): Several adults of the color varieties of P. leucophthalmus L. are very abundant on strawberries at University Farm, Newark.

PEPPER

PEPPER WEEVIL (Anthonomus eugonii Cano)

California. J. C. Elmore (June 3): Large percentage of blossom buds in a field of paprika near San Juan Capistrano were infested. Plants were small and setting their first blossom buds.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Pennsylvania. B. F. Coon (June 21): Very scarce at Lancaster and damage is light.

Florida. F. S. Chamberlin (June 10): More abundant in tobacco in Gadsden County than for several years.

A CURCULIONID (Trichobaris bridwelli Barber)

Georgia. P. M. Gilner, (May 27): Reported as damaging tobacco rather extensively in certain fields. First record on tobacco. (Det. by L. L. Buchanan.)

TOBACCO THRIPS (Frankliniella fusca Hinds)

Florida. F. S. Chamberlin (June 10): Abundant on tobacco in Gadsden County, and causing considerable injury to shade-grown tobacco.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. F. Bondy, et al. (June 14): Total of 20,800 plants examined in Florence County during the last week, and 196 weevils found, or 1 weevil to 106 plants, as compared with 1 weevil to 978 plants in 1940. (June 21): Square-infestation counts made in several fields near woods, infestation averaging 22.8 percent.

Georgia. T. L. Bissell (June 25): One weevil found on punctured square in Spalding County on June 18. Growing point of plants reported as killed. Square counts were made on four farms in Sumter and Macon Counties, southwestern Georgia, on June 20, and from 26 to 29 percent of squares on advanced cotton were found to be punctured. Damage well distributed in three fields in the open but in the fourth, which adjoined a woods, the weevils were concentrated on the side next to the woods, 90 percent of the squares being infested. On June 24 it was found that weevils had become numerous in Spalding County, since rains had begun 10 days previously. Found in four fields, most of them near woods.

P. M. Gilmer, et al. (June 14): Infestations in fields in the area of Tift, Berrien, Lowndes, and Echols Counties show a remarkably high percentage for this early in the season. Whereas many fields are uninfested or lightly infested, many have square infestations of from 6 to 12 percent. (June 21): Movement out of hibernation in Tift and Berrien Counties is apparently about complete, but damage has increased very little during the last week. Infestations average below 10 percent, except in the more heavily infested fields. Reported as increasing in northern section. First of first seasonal brood adults reported from Echols County.

Florida. C. S. Rude, et al. (June 21): Infestation remains light in most sections, despite the fact that emergence from hibernation cages is heavy and late. Weevils reported as abundant in fields of northwestern Florida.

Alabama. J. M. Robinson (June 23): Reported on June 18 from moderately to very active on cotton at Prattville, Autauga County, central Alabama.

Mississippi. C. Lyle (June 16): Heavy square infestations and large populations per acre reported during the last week. Weevils found on 64 of 101 farms visited in 35 counties, averaging 187 per acre, an increase from 140 per acre the previous week, and 96 2 weeks ago. On this date in 1940 only 20 percent of the farms were infested, weevils averaging about 30 per acre. Infestations are beginning to appear even in the most northern counties, including Prentiss, Tippah, and Union; several heavy infestations reported from the Delta counties.

Louisiana. R. C. Gaines, et al. (June 21): Punctured squares numerous in most fields in Madison Parish, in which plots were located.

Texas. K. F. Ewing, et al. (June 21): During the week 3,925 squares were inspected in 11 fields in McLennan and Falls Counties, averaging 30.7 percent of punctured squares. Maximum infestation was 55.7 percent in a field in the Brazos River bottom; second highest was 44.7 percent; and the third highest 37.5 percent. All inspections were made in river-bottom fields.

C. R. Parencia, et al. (June 21): Two weevils found during inspections in Calhoun County last week. In 1 field 300 squares examined were found to have 25.7 percent punctured.

A. J. Chapman (June 21): Square-infestation counts made in 26 fields within a radius of 10 miles of Brownsville, 200 squares being examined in each field. Infestation in the individual fields ranged from 1.0 to 93.5 percent, averaging 36 percent for the 26 fields. Heaviest infestations found in the early planted cotton.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

Texas. F. L. Thomas (June 18): Damage being caused in the coastal-bend area. Very little fruit is escaping at Port Lavaca, where infestation has increased to an average of 27 per 100 plants in 12 fields. (June 25): Cotton being damaged in southern Texas, but injury is not particularly important in the northern two-thirds of the State. There was a 50-percent increase of young hoppers near Port Lavaca, where the average count was 40 per 100 plants.

C. R. Parencia, et al. (June 21): Total of 4,400 cotton terminal buds inspected in 12 fields in Calhoun County during the week. An average of 8.25 adults and 31.75 nymphs was found per 100 terminal buds, as compared with an average of 8.79 adults and 19.04 nymphs last week. Several fields of May-planted cotton are heavily infested.

K. P. Ewing, et al. (June 21): During the week 21,575 terminal buds were inspected in 68 fields in McLennan and Falls Counties. Average infestation was found to be 4.86 per 100 terminal buds. Ten fields showed an average of from 10.0 to 25.2 per 100 buds.

A. J. Chapman (June 21): Infestation in the vicinity of Brownsville is sufficient to prevent the setting of squares. Adults, nymphs, and numerous blasted squares were observed.

C. O. Gingrass (June 19): Untreated cottonfields in Hidalgo County are being severely damaged.

APHIDS (Aphididae)

South Carolina. F. F. Bondy, et al. (June 21): Some cotton aphids are present in all cottonfields in Florence County, and two severe infestations have been reported. The aphids were found to be quite heavily parasitized, and several predators were also observed.

Georgia. T. L. Bissell (June 25): Cotton infested and leaves curled on edges of a field at Montezuma, Macon County, on June 20.

P. M. Gilmer, et al. (June 21): Aphids are beginning to reappear in isolated fields in Tift and Berrien Counties. A few heavy infestations reported in small areas in such fields. Some parasitization noted.

Mississippi. C. Lyle, et al. (June 25): Cotton aphids, Aphis gossypii Glov., reported as generally but lightly infesting cotton over the northeastern counties, in the Durant, Jackson, and Meridian districts, and in Clay, Lowndes, Noxubee, Webster, and Winston Counties.

E. W. Dungan, et al. (June 21): No aphid counts were made in Washington County during the last week, but the population appeared to increase. Large aphids of the dark phase persist. Some small yellow forms appear to be present also.

Louisiana. R. C. Gaines, et al. (June 21): Infestation light in Madison Parish during the last week.

COTTON LEAF WORM (Alabama argillacea Hbn.)

Texas. F. L. Thomas (June 25): Reported only in small numbers. Small, newly hatched larvae of the second generation have appeared in Calhoun County.

C. R. Parencia (June 10): One larva collected on cotton at Long Mott, Calhoun County, on June 6. (Det. by C. Heinrich.)

C. R. Parencia, et al. (June 21): A larva about 3 days old was found on a farm 3 miles west of Port Lavaca on June 17.

A. J. Chapman, et al. (June 21): A few specimens were noted in cotton on the Texas side of the Rio Grande River, near Brownsville.

THRIPS (Thysanoptera)

Georgia. T. L. Bissell (June 25): Cotton in a screenhouse was heavily infested and stunted on June 2.

Mississippi. E. W. Dungan, et al. (June 20): Damage is swiftly disappearing in cotton in Washington County, and the thrips population is not increasing.

C. Lyle (June 25): Injured cotton plants received from Attala County.

Texas. F. L. Thomas (June 18): Damage to cotton in the coastal-bend area. Plant growth slowed up, owing to weather conditions, so that injury has appeared, despite rains in some of the fields of Brazos, Jackson, and Kaufman Counties.

F O R E S T A N D S H A D E - T R E E I N S E C T S

PERIODICAL CICADA (Magicalcaca septendecim L.)

New York. N. Y. State Coll. Agr. News Letter (June 9): This insect has been observed generally throughout the Red Hook, Rock City, and Tivoli areas in Dutchess County, and its noise was heard as far south as Manchester Bridge, just east of Poughkeepsie, on June 3.

CANKERWORMS (Geometridae)

Vermont. H. L. Bailey (June 23): Groups of elms completely defoliated by the spring cankerworm (Paleacrita vernata Peck) in Shelburne, Chittenden County, and Ferrisburg, Addison County. Pupae found in soil on June 6, when a few larvae were still feeding.

West Virginia. F. W. Craig (June 18): Outbreak of spring cankerworm, which has occurred in the vicinity of Wheeling for the last several years, was not nearly so intense this spring. Greatest damage was on the edge of the heavily infested areas of last year and in an area 25 miles to the south. Larvae were mature on June 10. In 1940 larvae were still feeding on June 20, whereas on June 9, 1939, they had already disappeared.

North Dakota. J. A. Munro (June 23): Trees badly defoliated by cankerworms along the Sheyenne River near Fargo and at various points along the Red River, on the eastern border of the State. Spring cankerworms predominate.

Nebraska. H. D. Tate (June 20): Spring cankerworms noticed in Redwillow, Furnas, and Phelps Counties on May 22. Damage to elms and hackberry very severe. Reported on Chinese elms in Custer County on May 26. Severe infestation noted on boxelder, willow, wild plum, wild rose, elm, chokecherry, and wild gooseberry in Dawes and Sioux Counties on June 5.

Kansas. H. B. Hungerford (June 12): The fall cankerworm (Alsophila pometaria Harr.) was very destructive in the woodlands of Douglas County.

F O R E S T T E N T C A T E R P I L L A R (Malacosoma disstria Hbn.)

Maine. F. H. Lathrop (June 13): Generally abundant in May throughout most of the southwestern part of Maine. Reported as numerous in Kennebec, Knox, and Lincoln Counties, and a few in several localities in Washington County. Damage generally light to moderate.

Vermont and Massachusetts. J. V. Schaffner, Jr. (June 18): Outbreak, which has persisted for the last 5 or 6 years in many localities throughout the southern half of Vermont and the western part of Massachusetts, has subsided, with the exception of the vicinity of Richmond and West Stockbridge in the extreme western part of Berkshire County, Mass. On June 18 in these two towns hundreds of acres of woodlands were

25- to 75-percent defoliated. A considerable number of the larvae are dying of wiltlike and fungous diseases.

Wisconsin. E. L. Chambers (June 28): Very bad in several northeastern counties.

Mississippi. J. P. Kislanko (June 25): Egg masses observed on the twigs of forest trees in Forrest County on June 19; several times as numerous as last year.

Nebraska. H. D. Tate (June 20): Reported as very abundant and destructive to trees and shrubs in Scotts Bluff County. Cottonwood and poplar trees were damaged most heavily, and injury was noted on Russian olive, apple, and other fruit trees. Observed on cottonwood, ash, and elm in Scotts Bluff County on May 28, and on cottonwood in Cherry County on June 4.

WESTERN TENT CATERPILLAR (Malacosoma pluvialis Dyar)

Oregon. S. M. Dohanian (May 21): Found in varying intensities of abundance 1 mile north of Amity, Yamhill County, and continuing 9 miles south, attacking wild apple, wild rose, wild hazel, and alder. Reported as defoliating orchard, shade, and forest trees in and near Tillamook, Tillamook County, and shade trees and a 2-acre apple orchard in Mapleton, Lane County. (Det. by C. Heinrich.)

GYPSY MOTH (Porthetria dispar L.)

General. H. N. Bartley (June 18): Egg-hatching season is approximately 3 weeks earlier than in 1940, indicating one of the earliest on record. First observed hatching in Massachusetts on April 20, in New Hampshire and Vermont on April 21, and in Maine on April 26.

Maine. F. H. Lathrop (June 13): Very severe damage to untreated apple and other trees in York and "Twin" Counties was reported during May.

A. E. Brower (June): Abundant in places in southwestern Maine, defoliating shade trees and woodlands.

Vermont. S. S. Crossman (May 24): Examination of all growth surrounding a single egg cluster located last December in Lowell Township, Orleans County, in northern Vermont, gave negative results, indicating that infestation had originated from wind-spread larvae during the spring of 1940.

BROWN-TAIL MOTH (Nygmia phaeorrhoea Donovan.)

Maine. F. H. Lathrop (June 13): During May very severe damage was caused to untreated apple trees in Auburn and vicinity. Reported as generally destructive to untreated trees in York County, where there is the greatest outbreak that has occurred for several years.

A. E. Brower (June): Much damage in southwestern Maine.

H. N. Bartley (June 18): Larvae first observed feeding at Poland on April 21. An apparent increase in infestation is reported along the central coastal region of Maine.

BAGWORM (Thyridopteryx ophemeraciformis Haw.)

Mississippi. C. Lyle and assistants (June 25): Specimens on cedar received from Claiborne County on June 14, and a heavy infestation was recently found in Hinds County.

Oklahoma. R. G. Dahms (June 22): Reported on evergreens from Comanche and Caddo Counties.

Texas. D. C. Farman (June 24): More numerous than usual.

WEBWORMS (Hyphantria spp.)

Virginia. A. M. Woodside (June 23): Webs of the fall webworm observed on cherry trees at Fishersville; damage is light.

Florida. A. H. Madden (June 3): Quite abundant on pecan in the vicinity of Quincy, western Florida.

Mississippi. C. Lyle and assistants (June 25): First larvae noted in Oktibbeha County on June 17; first observed in the Jackson district on June 20, and first reported from Clay County on June 10. Webs began to appear late in May and have become quite numerous on pecan and persimmon trees in the southeastern counties and on pecan trees in Harrison County. Light infestations observed in Attala County.

Missouri. A. C. Burrill (June 1): Small webs found on boxelder and mulberry in Jefferson City.

A GELECHIID (Dichomeris ligulellus Hbn.)

Minnesota. C. E. Mickel (May 24): Moth has been exceedingly abundant in flight in the vicinity of Saint Paul for the last 3 weeks. Unusual number of moths, which are apparently ovipositing. (Det. by J. F. G. Clarke.)

ASH

AN APHID (Prociphilus fraxinifolii Riley)

Utah. G. F. Knowlton (June 3): Ten percent of the foliage of a green ash tree was severely curled at Springville. On June 14 aphids were severely rolling green ash leaves on a few trees east of Corinne.

BEECH

A WOOLLY APHID (Phyllaphis fagi L.)

New York. R. E. Horsey (June 23): Beech woolly aphid numerous on the leaves of several varieties of European beech in an ornamental planting at Rochester on May 31.

BOXELDER

CECROPIA MOTH (Samia cecropia L.)

North Dakota. J. A. Munro (June 23): Reported as causing severe defoliation in the vicinity of Bismarck.

BOXELDER APHID (Periphyllus nogundinis Thos.)

Utah. G. F. Knowlton (June 5): Very annoying, spotting cars parked under boxolders at Logan and various other localities in northern Utah.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Bdv.)

Kentucky. W. A. Price (June 24): Highly parasitized specimen received from Lebanon Junction.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Vermont. H. L. Bailey (June 23): Egg masses numerous at Winooski, Chittenden County, on June 6. Many newly hatched larvae.

New York. N. Y. State Coll. Agr. News Letter (June 9): Hatching rapidly in Dutchess County.

Pennsylvania. G. B. Sleesman (June 17): Found generally throughout the Philadelphia area, attacking American, English, and allied species of elm. Numerous adults and egg masses present.

Ohio. E. W. Mendonhall (June 17): Present on elm trees in Dayton and vicinity, and some damage reported. Quite bad in different sections of Columbus, and elm trees have been considerably damaged.

Utah. G. F. Knowlton (June 6): Light injury to elms at Smithfield.

LARGER ELM LEAF BEETLE (Monocosta coryli Say)

Virginia. H. G. Walker and L. D. Anderson (June 27): Very abundant on elms in certain sections of Norfolk County.

MOURNING-CLOAK BUTTERFLY (Hamadryas antiopa L.) . . .

Delaware. L. A. Stearns (May 24): Larvae submitted for identification were reported as feeding heavily on willow at Wilmington.

Utah. G. F. Knowlton (June 14): Larvae are stripping foliage from small Siberian elm trees 5 miles southeast of Ogden.

ELM CASEBEARER (Coleophora limosipennella Dup.)

Michigan. E. I. McDaniel (June 11): Specimen received on June 6 from Grosse Ile.

APHIDS (Eriosoma spp.)

Minnesota. A. G. Ruggles and assistants (June 19): Very abundant and causing damage to elm trees in Cottonwood, Dakota, and Kanabek Counties.

Nebraska. H. D. Tate (June 20): The elm leaf curl aphid (E. americanum Riley) was submitted from Butler, Logan, Dodge, and Dawson Counties during the period May 26 to June 14. Observed on a number of trees in Lancaster County on May 22, and on elm on May 26 in Custer County.

Oklahoma. F. A. Fenton (June 24): The woolly elm aphid (E. rileyi Thos.) was found at Bristow on June 14.

Utah. G. F. Knowlton (June 21): American elm leaves seriously curled by E. americanum near Layton.

ELM COCKSCOMB GALL (Colophra ulmicola Fitch)

Illinois. C. L. Metcalf (June 26): Reported as ruining foliage of elm trees in numerous areas in north-central Illinois.

Wisconsin. E. L. Chambers (June 28): Very abundant in southeastern counties.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Connecticut. P. Wallace (June 4): Becoming so abundant that control measures are needed in North Branford, Hamden, and Cheshire, particularly on small trees and recent transplants.

Virginia. A. M. Woodside (June 23): Crawlers have been present on American elm trees at Waynesboro since June 17.

West Virginia. F. W. Craig (June 18): Found for the first time in Charleston. Previously known to be present in Wheeling and Chester.

Wisconsin. E. L. Chambers (June 28): Several new locations of infestation reported; increasing in untreated areas.

Utah. G. F. Knowlton (June): Several 6-year-old trees of Chinese elm at Springville damaged on June 3. Siberian elm was being attacked on June 11 at Farmington.

ELM LEAF MINER (Fenusa ulmi Sund.)

Rhode Island. B. Eddy (June 20): Heavy infestations observed throughout the State on June 6.

North Dakota. H. S. Telford (June 23): Very abundant on American elm during late May and early June.

ELM SAWFLY (Cimbex americana Leach)

Wisconsin. E. L. Chambers (June 28): Quite abundant in several towns in Waukesha and Dodge Counties.

Nebraska. H. D. Tate (June 20): An almost full-grown larva was collected on an elm tree in Lancaster County on June 2, and another specimen taken in the same county on June 12.

Kansas. H. B. Hungerford (June 12): Numbers have been increasing in southern Kansas for the last 3 years. For the last two seasons it has been serious at Coffeyville, and is attracting attention this year at Wichita.

HACKBERRY

NIPPLE GALLS (Pachypsylla spp.)

Rhode Island. B. Eddy (June 19): Hackberry nipple gall (P. celtidis-mamma Riley) infestation heavy on one ornamental tree at Cowesett.

Oklahoma. F. A. Fenton (June 24): P. celtidis-mamma and P. venusta O. S. were very common on hackberry trees at Ardmore on June 13 and at El Reno on June 17. (Det. by E. P. Felt.)

HICKORY

A GALL (Phyllonera caryaecaulis Fitch)

New York. R. E. Horsey (June 23): A large native false shagbark hickory at Rochester was observed on June 20 to be almost dead, following a severe infestation of the hickory leaf stem gall, that has become worse every year. Other native hickories in this same area are infested.

LARCH

LARCH CASEBEARER (Collocophora laricicola Hbn.)

New England. P. B. Dowden (June 6): Considerable injury observed during the latter half of May. Infestations rather spotty but frequently

severe, and injury is decidedly more noticeable than for the last 2 or 3 years. Infestations particularly noticed in Washington County, Maine, Sullivan County, N. H., and Windham County, Vt. Isolated trees which have been severely browned have been observed in New Haven and Hartford Counties, Conn.

Vermont. H. L. Bailey (June 23): The larch case bearer is very abundant in Washington County, central Vermont.

Massachusetts and Connecticut. M. P. Zappe and A. DeCaprio (June): Very abundant on larches in Litchfield County, Conn. Ornamental larches in other parts of the State show some injury. Also noted in southwestern Massachusetts.

New York. R. E. Horsey (June 23): On June 20 a large American larch in an ornamental planting at Rochester was observed to be badly damaged.

AN APHID (Chermes strobilobius Kltb.)

New York. R. E. Horsey (June 23): Woolly larch aphid common on May 31 on American and European larches in an ornamental planting in Rochester.

LOCUST

LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

Connecticut. M. P. Zappe (June): Many adults present on locust in towns along the Connecticut River.

Pennsylvania. G. B. Sleesman (June 14): One block of elms heavily infested in a nursery at Philadelphia.

Virginia. A. M. Woodside (June): Most of the larvae have left black locust leaves on trees at Augusta and Rockingham Counties. Adults are now feeding on foliage and causing light damage.

MAPLE

GREEN-STRIPED MAPLE WORM (Anisota rubicunda F.)

Virginia. A. M. Woodside (June 23): A few half-grown larvae observed on a silver maple at Fishersville; tree has been infested each year for several years. Damage is light.

GREEN FRUITWORM (Graptolitha antennata Walk.)

Indiana. J. J. Davis (June 23): Green maple worm, probably this species, ~~was~~ defoliating soft maple in a timber area in Jackson County, southern Indiana, on May 26. Ash and hickory also injured. Examination on June 5 showed that maple trees were beginning to recover. Larvae had left the trees and entered soil preparatory to pupation. What was probably this same species defoliated maples at Aurora, southeastern Indiana, on May 23.

MAPLE LEAF STEM BORER (Priophorus acericaulis MacG.)

Rhode Island. B. Eddy (June 20): Observed on June 1 on sugar maple in Rumford.

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

Ohio. T. H. Parks (June 25): Maple leaves sent in from Gallia County on June 23 bore specimens in such abundance as to cover the leaves with their white secretion.

Kentucky. W. A. Price (June 24): Specimens received on maple leaves from Hazel Green.

Georgia. T. L. Bissell (June 25): On May 28 scattered leaves of large Norway maple, with colonies, were received from Griffin. Quantities of wool and honeydew whitened the tree and ground. On May 27 it was reported from Atlanta.

Mississippi. C. Lytle (June 25): Specimens on maple were received on June 14 from Oktibbeha County.

BLADDER MAPLE GALL (Phyllocoptes quadripes Shin.)

Ohio. T. H. Parks (June 25): Specimens received throughout June from widely separated localities.

Wisconsin. E. L. Chambers (June 28): Many infested leaves have been received.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Tennessee. G. M. Bentley (June 25): Reported on May 31 on maples at Cleveland, Bradley County, and Dickson, Dickson County.

Ohio. E. W. Mendonhall (June 12): Abundant and causing light damage to elm and maple trees in Columbus.

Wisconsin. E. L. Chambers (June 28): Abundant in several towns in Manitowoc County during June.

Wyoming. B. T. Snipes (June 21): Large poplars at Green River have been heavily attacked, but now show little damage.

OAK

A LEAF MINER (Cameraria sp.)

Alabama. J. M. Robinson (June 23): Oak leaf miner reported as active on oak at Birmingham on June 19.

EUROPEAN FRUIT LECANIUM (Locanium corni Bouche)

New York. R. E. Horsey (June 23): Numerous on June 9 on a shingle oak in a nursery at Rochester.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Connecticut. M. P. Zappe (June): Apparently more abundant than usual in northern parts of Connecticut on red and other pines, probably owing to rather mild winter.

Ohio. T. H. Parks (June 25): Specimens received on May 28 from Painesville, Lake County.

Michigan. E. I. McDaniel (June 11): Larvae were full grown at Farmington on June 6. Several specimens had pupated.

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Const.)

Virginia. L. A. Hetrick (June 2): Severe damage to a plantation of Pinus taeda in New Kent County by first generation. Many now in the pupal stage, but no adults noted. (Det. by C. Heinrich.)

Texas. R. K. Fletcher (June 11): Specimens reared from the tips of pine; found in a nursery at Potcet, Atascosa County. (Det. by C. Heinrich.)

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Wisconsin. E. L. Chambers (June 28): Quite abundant on ornamental plantings in northern Wisconsin, as well as in white pine stands. Blue spruce found infested in some places.

A SCARABAEID (Anomala oblivia Horn)

Virginia. L. A. Hetrick (June 2): First adults noted in Middlesex County. Some injury from feeding of adults on basal portions of developing needles of Pinus taeda. (Det. by E. A. Chapin.)

WHITE-SPOTTED SAWYER (Monochamus scutellatus Say)

Rhode Island. B. Eddy (June 20): Heavy on Austrian pine on May 26 at East Greenwich.

SAWFLIES (Neodiprion spp.)

Massachusetts. J. V. Schaffner, Jr. (June 18): During the early part of June the larvae of pine sawflies were very common generally, and in some localities abundant on pitch and red pines throughout the eastern half of Massachusetts. In most cases the species observed were N. dyari Rohw. on pitch pine and a new species of Neodiprion on red pine. Control measures were necessary on many acres of red pine to prevent serious defoliation.

Virginia. L. A. Hetrick (June 2): Complete defoliation of stands of Pinus taeda is being caused in parts of King William, King and Queen, and Caroline Counties by N. americanum Leach. (June 20): This sawfly has also caused defoliation of the same tree on Chinquoteague Island, Accomac County. Development of larvae is approximately 10 days later than in the vicinity of West Point, King William County.

INTRODUCED PINE SAWFLY (Diprion simile Htg.)

Michigan. E. I. McDaniel (June 11): Found feeding on Scotch pine on May 22 in Benton Harbor. Specimens received were half grown. On May 30 a heavy infestation occurred in a planting at East Lansing; a number of Austrian pines were stripped.

A SAWFLY (Itycorsia zappei Rohw.)

Pennsylvania. G. B. Sleesman (June 20): Two white pine trees in a nursery at Swarthmore were completely defoliated by a pine sawfly. A rather heavy infestation was found last year in a forest planting of pitch and mugho pines near Angelica.

PINE BARK APHID (Pineus strobi Htg.)

New York. R. E. Horsey (June 23): Numerous on June 18 on the trunk and branches of white pine in an ornamental planting at Rochester.

Wisconsin. E. L. Chambers (June 28): Observed as quite abundant in Oneida and Lincoln Counties.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Wisconsin. E. L. Chambers (June 28): Several reports of infestations received, and specimens sent in for identification.

Nebraska. H. D. Tate, (June 20): Specimens and reports of damage submitted from Sheridan County on June 12.

A SCALE (Aspidiotus ithacae Ferris)

Wisconsin. E. L. Chambers (June 28): Black pine leaf scale reported as abundant in several places in Sauk County.

PINE TORTOISE SCALE (Toumeyella numismaticum P. & M.)

Wisconsin. E. L. Chambers (June 28): Observed to be quite abundant in jack pine stands in Barron and Sawyer Counties.

SPRUCE

EUROPEAN SPRUCE SAWFLY (Gilpinia polytoma Htg.)

Maine. A. E. Brower (June 23): Since June 10 second- and third-stage larvae have been received from many places in the southern half of Maine, indicating early emergence and development.

Vermont. H. L. Bailey (June 23): Survey during week of June 16 in Wilmington-Marlboro-Dover area revealed a very light infestation. Larvae found at only 12 out of 52 points where beatings were made, and numbers were very limited at these points.

AN APHID (Pineus pinifoliae Fitch)

Vermont. H. L. Bailey (June 23): Spruce gall aphids are very abundant at Newfane, Windham County, southeastern Vermont. Dead adults, some with eggs, observed on white needles on June 7. Browened twigs and galls seen on almost all branches of red spruce in vicinity. Similar condition reported from Chester, Windsor County, about 25 miles north.

P. B. Dowden (June 6): Several stands of red spruce at Jacksonville, Windham County, observed today to be heavily infested. Galls were just opening, and winged aphids were very common.

EASTERN SPRUCE GALL APHID (Adelges abietis L.)

Wisconsin. E. L. Chambers (June 28): Abundant on one property in Fond du Lac County.

SPRUCE BUDWORM (Cacoccia fumiferana Clem.)

Michigan. E. I. McDaniel (June 11): Specimens, which were infesting spruce, were received from Scottville on June 6.

SUMAC

SUMAC FLEA BEETLE (Blepharida rhois Forst.)

Virginia. L. A. Hetrick (June 2): Dwarf sumac defoliated in parts of Middlesex County. (Det. by H. S. Barber.)

Mississippi. C. Lyle (June 25): Specimens of what appeared to be larvae of the jumping sumac beetle were received from Lauderdale County on June 13.

Missouri. A. C. Burrill (May 29): Many larvae found attacking leaves of Rhus at Jefferson City. (Det. by W. H. Anderson.)

A FULGORID (Ormonis pruinosa Say)

Mississippi. C. Lyle (June 25): Adults and nymphs on sumac received on June 13 from Lauderdale County.

WILLOW

A LEAF BEETLE (Chrysomela lapponica L.)

Ohio. T. H. Parks (June 25): Spotted willow leaf beetles were very common on pussy willow during the early part of May. Infestation was general.

Indiana. J. J. Davis (June 23): Reported as abnormally abundant throughout the northern half of Indiana, most of the reports having been received during the first half of June.

Nebraska. H. D. Tate (June 20): Specimens infesting laurel-leaved willow in Douglas County were received on June 3.

EUROPEAN WILLOW LEAF BEETLE (Plagiodera versicolora Laich.)

New York. R. E. Horsey (June 23): Common on various willows on June 18, but not so severe as last year.

Pennsylvania. G. B. Sloesman (June 17): Willows in the Philadelphia area in many instances have been partially defoliated.

POPLAR AND WILLOW BORER (Sternochetus lapathi L.)

Ohio. T. H. Parks (June 25): Exceedingly destructive to limbs of pussy willows during May and the early part of June.

A SATURNIID (Hemileuca nevadensis Stretch)

Nebraska. H. D. Tate (June 20): Caterpillars found feeding on willow in Arthur County on June 6 were identified as the buck moth.

I N S E C T S A F F E C T I N G G R E E N H O U S E

A N D O R N A M E N T A L P L A N T S

CARROT BEETLE (Ligyrus gibbosus Deg.)

Virginia. H. G. Walker and L. D. Anderson (June 12): Reported as severely injuring several kinds of flowers at Onancock.

Nebraska. H. D. Tate (May 20): Several specimens were collected around lights in Buffalo County.

STALK BORER (Papaipema nebris nitola Guen.)

Wisconsin. E. L. Chambers (June 28): Reported as damaging dahlias, delphinium, tomatoes, and potatoes in the southern part of the State.

APPLE LEAF CRUMPLER (Mincola indigenella Zell.)

Mississippi. C. Lyle (June 25): Noted in Harrison and Clay Counties where Pyracantha and Japanese plum were infested on June 6 and 18.

North Dakota. H. S. Telford (June 23): Severely damaged a number of cottoncaster hedges lately in Fargo.

A CICADELLID (Homalodisca triquetra F.)

Texas. R. K. Fletcher (June 15): Extremely abundant on ornamentals, annuals, and perennials in Brazos County.

FOUR-LINED LEAF BUG (Poecilopsus lineatus F.)

Ohio. T. H. Parks (June 25): Sent in from Akron in June with the statement that they were attacking flowers.

Wisconsin. E. L. Chambers (June 28): Reported as numerous from the southern part of the State.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Indiana. P. T. Ulman (June 20): Young scales were very abundant on flowering cherry, ~~mountain~~ ash, and purple-leafed plum at Indianapolis; the progeny of a few adults almost completely covered shrubs 3 or 4 feet tall.

WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

Virginia. H. G. Walker and L. D. Anderson (June 27): Numerous requests received during the last month from the Norfolk district for information on control on a number of plants, privet, mulberry, peach, etc.

North Carolina. C. S. Brimley (June 20): Reported on kudzu vine, near the roots, causing the leaves to wilt. It is quite common at Raleigh on privet hedges, sometimes killing them. The scale was also on chinaberry, mulberry and candytuft.

Mississippi. D. W. Grimes (June 25): Was causing injury to a privet hedge in Sunflower County.

GLOBOSE SCALE (Lecanium prunastri Fonsc.)

Pennsylvania. T. L. Guyton (May 6): Taken at Herndon. (June 16): Noted in Coatesville on peach.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Texas. R. K. Fletcher (June 24): Present in Harris County on May 31 and on shrubs in Nueces County on June 17.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

New York. R. E. Horsey (June 23): Numerous on lilac and ash. Considerable on Eleagnus sp., surrounding a badly infested ash tree. Noted in a plot of overgrown stock at Rochester on June 9.

AZALEA

AZALEA LEAF MINER (Gracilaria azaleella Brants)

District of Columbia. C. A. Weigel (May 29): Specimen infesting azalea in propagating houses at the National Arboretum in Washington. (Det. by J. F. G. Clarke.)

AZALEA LACEBUG (Stephanitis pyrioides Scott)

Mississippi. C. Lyle, et al. (June 25): Caused severe damage in the Meridian territory.

CHRYSANTHEMUM

CHRYSANTHEMUM GALL MIDGE (Diarthronomyia chrysanthemi Ahlberg)

Mississippi. C. Lyle (June 5): Specimens were received from Hinds County.

GREENHOUSE LEAF TIER (Phlyctaenia rubigalis Guen.)

New York. N. Y. State Coll. Agr. News Letter (June 9): Caused extensive damage in one plant house in Niagara County.

CHRYSANTHEMUM APHID (Macrosiphoniella sanborni Gill.)

New Jersey. M. D. Leonard (May 25): A number of small garden plants showed moderate infestation at Haddonfield.

COLUMBINE

COLUMBINE LEAF MINER (Phytomyza miniscula Gour.)

Wisconsin. E. L. Chambers (June 28): Abundant in the southern part of the State.

CRAPEMYRTLE

CRAPEMYRTLE APHID (Myzocallis kahawaluokalani Kirk.)

Mississippi. C. Lyle (June 25): Very heavy infestation observed on a fairly large crapemyrtle tree in Jackson County on June 11.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Const.)

Mississippi. C. Lyle (June 25): Specimens were received from Lee, Oktibbeha, and Washington Counties between May 22 and June 10.

FERN

FERN SCALE (Pinnaspis aspidistrae Sign.)

Alabama. J. M. Robinson (June 23): Reported as active on fern at Hurtsboro.

GLADIOLUS

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Mississippi. C. Lyle (June 25): Found on gladiolus bulbs from Leflore County and on narcissus bulbs from Lowndes County on May 28 and June 11.

HYDRANGEA

A LEAF ROLLER (Exartena ferriferanum Walk.)

Pennsylvania. L. G. Baurhofer (May 21): Three adults were reared from pupae found in curled and crumpled leaves of plant reported to be early hydrangea from Newville. It could not be determined whether the larvae had fed on leaves or had merely distorted them as a place for pupation. (Det. by C. Heinrich.)

IRIS

IRIS BORER (Macronoctua onusta Grote)

Pennsylvania. G. B. Sleesman (June 18): Found generally throughout the Philadelphia area in nurseries. Both the flower and foliage have been attacked.

JUNIPER

JUNIPER WEBWORM (Recurvaria juniperella Kearf.)

Ohio. E. W. Mendenhall (June 1): Quite bad in juniper in Lake County, causing some damage.

Pennsylvania. G. B. Sloesman (June 12): Very rare in the Philadelphia area until this year. Junipers in a nursery at Chestnut Hill were heavily infested. There is some doubt as to the correct identification of this insect.

JUNIPER SCALE (Lecanium fletcheri Ckll.)

Indiana. J. J. Davis (June 23): Reported as abundant on ornamental junipers from Brownstown and Crown Point.

LILAC

LILAC BORER (Podosesia syringae Harr.)

New York. R. E. Horscy (June 23): Numerous in an ornamental planting at Rochester on June 20.

LILY

FULLER'S ROSE BEETLE (Pantomorus godmani Crotch)

Oregon. C. F. Doucette (April 4): Adults collected on lily foliage, at Harbor; shallow rounded notches had been eaten out.

PELOX

PELOX PLANT BUG (Lopidea davisi Knight)

Minnesota. A. G. Ruggles and assistants (June 19): Injuring phlox at Winona.

TARNISHED PLANT BUG (Lygus pratensis oblineatus Say)

Ohio. E. W. Mendenhall (June 24): Is doing considerable damage to phlox plants at Amelia, Clermont County.

PYRACANTHA

QUINCE LACEBUG (Corythucha cydoniae Fitch)

Maryland. C. A. Wiegel (June 23): Was doing considerable damage to Laland firethorn at Silver Spring. Was first observed during late May and early June. It caused much damage during 1940.

Mississippi. C. Lyle (June 25): Infested the leaves of all the pyracantha plants on the campus of Mississippi State College.

RHODODENDRON

LACEBUGS (Tingitidae)

Delaware. L. A. Stearns (June 3): Abundant at Rodney Square Park, Wilmington.

Ohio. E. W. Mendenhall (June 1): The lacebug, Stephanitis rhododendri Horv., was found on private plantings in New Philadelphia, Tuscarawas County.

ROSE

ROSE SAWFLY (Caliroa aethiops F.)

Wisconsin. E. L. Chambers (June 28): Present in many localities of the State.

Nebraska. H. D. Tate (June 20): Skeletonized rose leaves were received from Douglas and Nance Counties on May 29 and June 12, respectively. Observed on roses in Custer County on May 26, and also noted in Lancaster County on May 30 and June 1.

ROSE SNOOT BEETLE (Rhynchites bicolor F.)

Utah. G. F. Knowlton (June 14): Causing severe injury to roses in many gardens throughout the Payson area. Damaging garden roses in Farmington and Salt Lake on June 5.

POTATO APHID (Macrosiphum solanifolii Ashm.)

Utah. G. F. Knowlton (June): Aphids were less abundant on June 6 in northern Utah, although in several gardens this aphid was attacking the tip growth of roses. Damaging rose tip growth at Cedar City on June 21.

ROSE APHID (Macrosiphum rosae L.)

New Jersey. M. D. Leonard (May 20): Fairly abundant on several rose bushes observed at Ridgewood and Haddonfield.

A ROSE LEAFHOPPER (Typhlocyba sp.)

Wisconsin. E. L. Chambers (June 28): Abundant in southern part of the State.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

Texas. R. K. Fletcher (June 24): Found on roses in Wilbarger County on May 26.

SNOWBALL

SNOWBALL APHID (Aphis viburnicola Gill.)

Utah. G. F. Knowlton (June 6): Seriously curled foliage on several bushes at Smithfield, but most of them have left the leaves.

BEAN APHID (Aphis rumicis L.)

Utah. G. F. Knowlton (June 6): Attacked blossoms and apical leaves of snowball bushes at Smithfield.

SPIREA

SPIREA APHID (Aphis spiraeicola Patch)

New Jersey. M. D. Leonard (May 20): Moderately abundant on several bushes observed at Ridgewood and Haddonfield.

Utah. G. F. Knowlton (June 3): Beginning to injure some spirea tips at Springville.

YEW

A MEALYBUG (Pseudococcus cuspidatae Rau)

Pennsylvania. T. L. Gayton (May): Collected at Harrisburg on Taxus sp. and reported as being very abundant on the host plant.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

MOSQUITOES (Culicinae)

Florida. J. B. Hull (May 31): A few mosquitoes (Aedes sollicitans Walk.) were observed on the island near Fort Pierce the last month.

Missouri. A. C. Burrill (June 2): First noticeable numbers of Culex spp. around Jefferson City after rains.

L. Haseman (June 25): A good many complaints are being received in central Missouri about mosquitoes, even in some cases where no outstanding breeding places are near.

Utah. G. F. Knowlton (June): On May 30 mosquitoes were very annoying to man on range land at south end of Cedar Valley, in Tooele County. On June 14 they were annoying at Corinne, Brigham, and Honeyville, mostly Aedes dorsalis Meig. On June 10 they were abundant and annoying at

Ogden and Kaneshville. On June 17 they were annoying man and livestock at Riverdale, Hooper, Sunset, Slaterville, and Utah Hot Springs. On June 18 A. dorsalis was extremely annoying to man in fields at Pleasant View and some at North Ogden and Tremonton.

Oregon. E. F. Knipling (May 31): First larvae of A. lateralis Meig. and A. vexans Meig. were found at Portland on May 9. Columbia River reached a maximum height of 9.6 feet during the week May 11-17. Peak of the flood is one of the lowest on record and was responsible for a very low population of flood-water mosquitoes.

SANDFLIES (Culicoides spp.)

Florida. J. B. Hull (May 31): Sandflies (Culicoides sp. ?) caused more annoyance during May in the vicinity of Fort Pierce than was reported prior to that time in 1941.

W. E. Dove (June 26): On June 15 surveying parties and workmen at Panama City were greatly annoyed by sandflies. C. mississippiensis Hoffm. and C. nelleus Coq. are the most common species. At Eglin Field sandflies are a problem in one area where a salt-marsh flat is near some of the barracks.

Illinois. C. L. Metcalf (June 26): Punkies were reported as seriously annoying man in the northeastern part of Illinois early in June.

CHIGGER (Tuttrambicula alfreddugesi Oud.)

Missouri. L. Haseman (June 25): This pest made its appearance in central Missouri early in June.

A FLY (Phlebotomus sp.)

Texas. H. M. Brundrett (June 24): Blood-sucking flies have been very annoying in Uvalde.

AMERICAN DOG TICK (Dermacentor variabilis Say)

Massachusetts. C. H. Smith (May 31): Adults were more numerous on Martha's Vineyard during the month than in any May of which we have a record except 1939. Larvae and nymphs were only moderately abundant.

CATTLE

SCREWORM (Cochliomyia americana C. & P.)

Florida. J. B. Hull (May 31): During the branding and marking of 3,000 cattle in May at Saint Lucie only one case was found; and that in the navel of a calf.

Louisiana. D. C. Parman (June 20): Survey and reports indicate no infestations in Louisiana.

Texas. D. C. Parman (June): On June 6 trapping records at Uvalde indicated that this fly was advancing north and east from Cuero and building up rapidly. Two cases were treated at Bryan on May 29, about 3 months earlier than last year in eastern Texas. The trap at Silver Lake took 2,477 flies on June 1, by far the most ever trapped. By June 24, trap catches indicated a build-up of one of the highest general populations during the last 6 years on the western part of Balcones Escarpment, from Uvalde to Pecos County. Population continues very low on the lower Rio Grande and Gulf plains, and to the east of San Antonio. Overwintered infestation in southern Texas has spread to Houston and Mexico, east into Oklahoma, and north and west into New Mexico. Heavy infestations and death losses in most of western Texas.

New Mexico. D. C. Parman (May 26): Ranchman at Roswell stated today that he had a few cases, the earliest he had ever had.

Arizona. D. C. Parman (June 24): Many cases reported from along the Colorado River.

California. D. C. Parman (June 24): Many cases reported in the southern San Joaquin Valley, and from along the Colorado River.

HORN FLY (Haematobia irritans L.)

Florida. W. E. Dove (June 26): Averaged about 200 per animal at Panama City on June 25, ranging from only a few to as many as 2,000 on some animals.

Texas. D. C. Parman (June 24): The high population in May has practically disappeared at Uvalde, possibly owing to several severe rains.

Utah. G. F. Knowlton (June 5): Hornflies are annoying cows near Salt Lake.

Washington. F. C. Bishopp and E. F. Knipling (June 15): Causing much annoyance to livestock in the general area of Pullman and Spokane. Horses, as well as cattle, are infested. Number of flies per head on dairy and beef cattle varies greatly, from 100 to 1,000, partly owing to use of fly sprays.

California. F. C. Bishopp and A. W. Lindquist (June 20): Herd of beef cattle on a mountain pasture 40 miles east of Nice has 50 to 1,000 per animal averaging about 300.

STABLEFLY (Stomoxys calcitrans L.)

Florida. W. E. Dove (June 23): In northwestern Florida range cattle have only an occasional fly at this season of the year. Flies range from 5 to 10 per animal about dairies.

S. W. Simmons (June 15): At Sarasota there was a severe outbreak of dog flies extending in an area about 30 miles wide.

Illinois. F. C. Bishopp (June 22): Present in considerable numbers in the Loop in Chicago. Specimens observed in the windows of office buildings, show windows, outside of buildings, and along the streets.

Missouri. L. Haseman (June 25): Livestock in central Missouri attacked by moderate numbers of stableflies since the early part of June.

GULF COAST TICK (Amblyomma maculatum Koch)

Florida. W. E. Dove, et al. (June 26): On June 16 adults ranged from about 1 to 3 per animal among half the animals examined at Bonifay.

DEER FLIES (Chrysops spp.)

Delaware. L. A. Stearns (June 6): C. fuliginosa Wied. and C. flavida Wied. were abundant and annoying in areas along the Delaware Bay shore, particularly around Odessa.

Florida. W. E. Dove (June 21): Black flies have disappeared and are being replaced by C. vittatus Wied. in the vicinity of Panama City, western Florida.

Utah. G. F. Knowlton (June 14): Deer flies, especially C. fulvastra O. S. and C. discalis Will., are annoying to man and livestock in the Corinne-Honeyville area.

HORSE

HORSEFLIES (Tabanus spp.)

Florida. W. E. Dove (June 26): In northwestern Florida green heads were scarce about woods cattle on June 20, but T. americanus Forst. had increased to about five adults per animal. The small black tabanid is present in about the same number. Some animals showed as many as 50 at one time. A predaceous wasp, Stictia carolina F., occurred in small numbers, averaging about 1 per animal. By June 25, these wasps averaged about 3 or 4 per animal.

Missouri. L. Haseman (June 25): The common brown species of horsefly has occurred in moderate numbers since the middle of June.

Utah. G. F. Knowlton (June 14): T. punctifer O. S. is annoying horses at Corinne and northwest of Salt Lake City.

BUFFALO GNATS (Simulium spp.)

Washington. F. C. Bishopp and E. F. Knipling (June 17): Very abundant on horses and cattle near mountain streams near Leavenworth. Horses are particularly attacked.

THROAT DOTFLY (Gasterophilus nasalis L.)

Washington. F. C. Bishopp and E. F. Knipling (June 25): On June 14 and 15 horses in the vicinity of Spokane carried from a few to several hundred eggs each. On June 14 very few eggs were observed in the Pullman area, most horses carrying none.

NOSE DOTFLY (Gasterophilus haemorrhoidalis L.)

Washington. F. C. Bishopp and E. F. Knipling (June 25): Some sections of horses in the vicinity of Spokane on June 14 and 15 indicated presence of this fly, but no eggs nor adults were seen. Two full-grown larvae were collected on June 14 from a horse at Pullman. Ten other horses examined had none.

HORSE DOTFLY (Gasterophilus intestinalis Deg.)

Washington. F. C. Bishopp and E. F. Knipling (June 25): On June 14 and 15 horses in the vicinity of Spokane each carried from 10 to 500 eggs.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

South Carolina. W. C. Nettles and F. Sherman (June 24): Prevalent on poultry in the eastern part of the State.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

ANTS (Formicidae)

Indiana. J. J. Davis (June 23): Unusually abundant in lawns throughout the State, especially in the northern half.

Mississippi. C. Lyle and assistants (June 25): Reported as causing annoyance in houses and gardens in Bolivar, Coahoma, Harrison, Madison, Perry, Pike, Tunica, and Washington Counties; also reported from northeastern counties. Iridomyrmex humilis Mayr was reported from Monroe County. Specimens of the tiny black ant, Monomorium minimum Duckl., were received on June 12 and 21 from Bolivar County; M. pharaonis L. was received on June 19 from Harrison County, where they were causing annoyance in a dwelling. Specimens of the fire ant (Solenopsis xyloni McCook) were received from Bolivar County.

Missouri. L. Hasenan (June 25): The common small household species are present in their usual numbers in central Missouri.

Utah. G. F. Knowlton (June): Observed on May 30 in a flower garden at Ogden. Found in several houses at Logan in June.

GERMAN COCKROACH (Blattella germanica L.)

Mississippi. C. Lyle (June 25): Reported from Monroe, Prentiss, and Tate Counties from May 21 to June 11.

Utah. G. F. Knowlton (June 5): Found infesting a restaurant at Ogden on May 31. Reported today as annoying in a kitchen at Logan.

California. P. Simmons (June 21): Reported as numerous in Fresno. Egg capsule and newly hatched young received. Numbers reported as estimated from 50 to 100.

ORIENTAL COCKROACH (Blatta orientalis L.)

Nebraska. H. D. Tate (June 20): Specimens received from Douglas and Franklin Counties on May 26 and 29, respectively.

BROWN-MAINED ROACH (Supella supelleotilium Serv.)

Mississippi. C. Lyle (June 25): Specimens received from Tippah County on May 29.

BROWN SPIDER BEETLE (Ptinus brunneus Duft.)

Oklahoma. F. A. Fenton (June 24): Found in grain on June 2 at Bartlesville.

DRUG STORE WEEVIL (Stegobium paniceum L.)

Ohio. T. E. Parks (June 25): Specimens received from Columbus with the statement that they were seriously injuring over-stuffed furniture.

CARPET BEETLES (Dermestidae)

Missouri. L. Haseman (June 25): A number of new houses in central Missouri have been seriously overrun by black carpet beetles (Attagenus piceus Oliv.), apparently owing to wall insulation material, at least in some instances.

Nebraska. H. D. Tate (June 20): Insects submitted from Colfax County on June 2 with the report that they had been found feeding on woolen garments were identified as Anthrenus verbasci L.

CONFUSED FLOUR BEETLE (Tribolium confusum Duv.)

Tennessee. G. M. Bentley (June 20): Found in accumulated waste flour and mill sweepings at Martin, Weakley County.

Nebraska. H. D. Tate (June 20): Discovered on June 6 in bran stored for grasshopper bait in Boyd County.

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MEAL MOTH (Pyralis farinalis L.)

Utah. G. F. Knowlton, et al. (June 14): Severe infestation present in a remodeled apartment house at Payson. Grain had been stored in the house for several years before it was remodeled.

MEDITERRANEAN FLOUR MOTH (Ephesia kuehniella Zell.)

Tennessee. G. M. Bentley (June 20): Found in a flour mill at Martin, Weakley County, in accumulation of waste material.

Utah. G. F. Knowlton, et al. (June 14): Severe infestation at Payson, where grain had been stored previously.

RED-LEGGED HAM BEETLE (Necrobis rufipes Deg.)

South Carolina. F. W. Craig (May 24): Found flying about a house in Charleston. Concentration of insects found in a box in which hams had been stored. (Det. by E. A. Chapin.)

Mississippi. G. L. Bond (June 25): One adult found on June 5 in Jackson County.

WEEVILS (Sitophilus spp.)

Nebraska. H. D. Tate (June 20): Specimen of the true granary weevil (S. granarius L.) received on May 19 from Kimball County.

Wyoming. D. T. Snipes (June 21): Rice weevils (S. oryza L.) were present in a grain elevator at Thermopolis, having entered in loads of grain. Damage is light.

Utah. G. F. Knowlton, et al. (June 14): Granary weevil was among stored-grain pests present at Payson, where grain had been stored. On June 4 S. granarius was infesting stored grain at Beaver.

INDIAN-MEAL MOTH (Plodia interpunctella Hbn.)

Illinois. W. P. Flint (June 23): Adults very abundant in steel bins of shelled corn. Larvae are migrating and webbing grain surfaces.

Nebraska. H. D. Tate (June 20): Discovered on June 6 in stored bran in Boyd County.